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6	FORMER NEBRASKA ORDNANCE PLANT
7	RESTORATION ADVISOR BOARD
8	BOARD MEETING
9	HELD IN MEAD, NEBRASKA
10	DATE: APRIL 6, 2006
11	TIME: 6:00 P.M.
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14	Reported by Cynthia A. Craig Videographed by John Thomas
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1 GARTH ANDERSON: Good evening everybody.

- 2 Welcome to the Mead Restoration Advisory Board
- 3 Meeting. I appreciate everyone coming out in spite
- 4 of the threatening weather. I'm Garth Anderson and
- 5 I'm the Corps of Engineer's project manager for the
- 6 Mead site.
- 7 Before I get started because of the
- 8 threatening weather I guess we've already kind of
- 9 thought about what happens if tornado sirens go off.
- 10 This is something I've never had to do before at a
- 11 RAB meeting, but it wasn't on the agenda but I think
- 12 it's important enough to cover.
- 13 What I've been told by those folks that
- 14 live in Mead, that the best place to go -- this
- 15 probably isn't the best building to be in, a big
- 16 steel building with a big sheet metal building next
- 17 to us, apparently a block that way is a --
- 18 Brady, where -- block that way, a block
- 19 over, the church?
- 20 BRADY BIGELOW: Down one block -- go to
- 21 the stop sign, down one block to --
- 22 GARTH ANDERSON: Follow him, hopefully the
- 23 doors are open when we get there.
- 24 All right. Well, without further ado
- 25 let's go ahead and get started, a couple of

- 1 administrative announcements.
- 2 Tonight we actually figured out how to get
- 3 the coffee pot to work, so we do have coffee,
- 4 cookies; help yourself, and maybe it'll make the
- 5 evening a little more pleasant.
- 6 There are handouts in the back as you came
- 7 in. If you did not sign in I'd really appreciate it
- 8 if you could sign in because we like to see who all
- 9 comes to these, and if you want to get added to our
- 10 mailing list we can do that too. There are copies
- 11 of our presentation slides back there and some other
- 12 items.
- 13 VIDEOGRAPHER: Remember me and the court
- 14 reporter.
- GARTH ANDERSON: Yes, we'll get there,
- 16 wouldn't forget you.
- 17 This is our agenda for tonight and I'll
- 18 get some introductions too. You know, review the
- 19 agenda, look at some items that we -- things we've
- 20 done since the last meeting.
- 21 We're going to talk about groundwater
- 22 monitoring; it's a big topic of interest, and we'll
- 23 get into that in some detail. We'll talk about the
- 24 next RAB meeting, and, of course, we're always open
- 25 to questions and answers.

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1 Introductions, our community co-chair,
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- 2 Ms. Melissa Konecky, is in back, you can wave. I
- 3 think everybody probably knows you already.
- 4 Again, I'm Garth Anderson, the Army
- 5 co-chair, and other board members, first we have
- 6 Scott Marquess from EPA Region 7, Mr. Larry Angle
- 7 from the Lower Platte Natural Resource District, and
- 8 a couple other Corps employees that are here
- 9 tonight. We have Mary Lyle, one of the project
- 10 engineers on the project, and Cathi Sanders, our
- 11 environmental attorney.
- 12 Did I miss anybody, Scott?
- SCOTT MARQUESS: Alyse Stoy.
- 14 GARTH ANDERSON: Yeah, Alyse Stoy, EPA
- 15 Region 7 attorney.
- 16 Okay. Some of the meeting guidelines just
- 17 to help the meeting run a little bit better, again
- 18 we -- it's public participation, we like to answer
- 19 questions. We'll stand up here as long as anybody
- 20 wants to.
- 21 Because of the weather we don't want to
- 22 linger too long so we're going to try to end on
- 23 time, stick to the agenda. Let's try to keep it to
- 24 one question at a time just so we can fully answer
- 25 everybody's question.

- 1 Slide.
- 2 Here's the kicker: Meetings are being
- 3 recorded. If you don't want to be on the DVD of
- 4 this meeting then you might have to hide your face
- 5 or something, but we have it recorded on DVD and we
- 6 also have a transcriptionist that will provide a
- 7 written transcript of the meeting.
- 8 Both of these items will be placed on
- 9 the -- the transcript will be placed on the web site
- 10 once it's complete, and the transcript with the DVD
- 11 will be placed in the Mead Public Library.
- 12 LYNN MOORER: When will that happen?
- 13 GARTH ANDERSON: A typical turnaround is
- 14 usually --
- 15 COURT REPORTER: Two, three weeks.
- 16 GARTH ANDERSON: About a month because we
- 17 get it from the transcriptionist, and then we do
- 18 some quality control on it to make sure all the
- 19 names and terms and everything is correct, and then
- 20 we'll make the corrections and then post it.
- 21 LYNN MOORER: I'm Lynn Moorer,
- 22 M-O-O-R-E-R.
- 23 Mr. Anderson, how many of the DVDs are in
- 24 the library now as you have said they are?
- 25 GARTH ANDERSON: Just one copy right now.

1 LYNN MOORER: And those were placed there

- 2 when?
- GARTH ANDERSON: Mr. Bigelow, those were,
- 4 what, two weeks ago?
- 5 BRADY BIGELOW: We Fed Ex them over, but
- 6 it gets held for a while. I'm going up tomorrow to
- 7 check to make sure everything we've Fed Ex'd has
- 8 made it in, but I can't -- I don't know if it's made
- 9 it onto the shelf yet.
- 10 MELISSA KONECKY: I don't think they've
- 11 made it -- anything has made it into the library
- 12 yet, as of Monday they haven't.
- BRADY BIGELOW: Yeah, when we Fed Ex
- 14 them up, sometimes it takes a little while because
- 15 they're not open every day, sometimes it takes them
- 16 a little while for them to get put on the shelf.
- 17 LYNN MOORER: So the record needs to
- 18 reflect they're not actually there. What you're
- 19 saying isn't actually true yet. We appreciate -- we
- 20 look forward to them being there, but we've been
- 21 looking forward to them for weeks and weeks and
- 22 weeks, and there's still nothing there.
- 23 BRADY BIGELOW: I'll check tomorrow.
- 24 GARTH ANDERSON: We'll confirm.
- 25 And if you do have a question in the back

1 we do have someone that's running a microphone, it's

- 2 Lisa Tholl, she's from URS, one of our contractors
- 3 working on the site.
- 4 Slide.
- 5 Mailing list, for those of you that would
- 6 like to get direct mail from the Corps of Engineers,
- 7 you can put your address on the sign-in sheet.
- 8 Again, it's -- we can't guarantee total privacy
- 9 because the information is -- becomes somewhat
- 10 public, so if you're sensitive to that then there
- 11 are other means for us to disseminate information to
- 12 you.
- 13 Slide.
- And we do have a project web site, it's
- 15 getting better all the time. We've -- we've been
- 16 posting things as we get it as quickly as we can
- 17 after we've checked it out to make sure it's
- 18 accurate.
- 19 And also an e-mail list, I've been
- 20 compiling an e-mail list of whoever's provided me
- 21 their address, and when I -- when I send things out
- 22 I do the mass e-mail mailing list to whoever has
- 23 provided me their address.
- One other feature I would like to point
- out is Mr. Brady Bigelow from our contractor ECC,

1 he is here with the project database, and he has the

- 2 capability tonight if you have any specific data
- 3 questions on monitoring, sampling, anything that's
- 4 been collected on site, he can run the query and
- 5 we'll be able to provide you an answer on that
- 6 tonight.
- 7 Okay. All right. Without further ado
- 8 let's move on with the actual presentation. Okay.
- 9 First, we're going to go through this --
- 10 let me just run through this. Status update, we're
- 11 going to talk about -- we've already covered this,
- 12 let's go on.
- 13 Status update, what have we done since the
- 14 last regular RAB meeting, which was the 1st of
- 15 December 2005? A lot of work has been done on
- 16 groundwater monitoring, and that's really our
- 17 featured topic for tonight, and Mary Lyle will walk
- 18 us through that later on tonight.
- 19 And I would like to point out one other
- 20 thing about our monitoring. If after the meeting
- 21 you have questions, we have maps available posted on
- 22 the walls of our third quarter sampling, which was
- 23 done in September; our fourth quarter sampling,
- 24 which was done in December; and we have our
- 25 2006 groundwater monitoring program laid out in the

1 back so you can see what the well sampling frequency

- 2 and surface water sample frequency is going to be,
- 3 and we have it broken down by each of the four
- 4 sampling events.
- 5 Okay. Load Line 1, we've done a lot of
- 6 work on Load Line 1 for those of you that are not
- 7 familiar with where Load Line 1 is. This -- this is
- 8 what we refer to as Load Line 1.
- 9 As we've been talking about in previous
- 10 meetings, we've -- could we get that door closed,
- 11 please? I think we're going to -- hold on.
- 12 Since our last RAB meeting, the
- 13 Extraction Well 12 and 13 at the southern end of
- 14 Load Line 1 plume have been installed, and we have
- 15 commenced full-scale operations, especially on
- 16 load -- on Extraction Well 12. 13 is not scheduled
- 17 to start pumping for another year or so yet, but
- 18 Extraction Well 12 is operational.
- The air stripper stand-alone treatment
- 20 system is operational, and we've done the start-up
- 21 testing and sampling and other things, so it is
- 22 operational at this point.
- 23 Part of that -- part of the start-up
- 24 operation also included doing some direct push
- 25 sampling just south. There's a small bit of

- 1 contamination just south of the extraction wells,
- 2 but still in the radius of influence of the
- 3 extraction well, right -- right down here, and we've
- 4 done extensive sampling through here and south of
- 5 that just to make sure that we have that -- that,
- 6 you know, complete picture of what is the southern
- 7 end of that plume.
- 8 The start-up data -- the start-up data is
- 9 in a handout in the back. It's a one-sheet table
- 10 that you can look at, and it's also been posted on
- 11 our web site.
- Okay. Next item, the eastern plume,
- 13 that's an area that's near and dear to everyone's
- 14 heart, the one that most of us are concerned about.
- When we -- when we met last, I'll point
- 16 here and I'm going to probably go over to those maps
- 17 over there. It may be difficult to brief from back
- 18 there, but, again, because of the detail of the maps
- 19 I'd be happy to -- you know, after the meeting if
- 20 anybody doesn't get a clear picture of what we're
- 21 doing there, then we'll stay as long as anybody
- 22 wants to be able to explain that.
- 23 As we talked about in our December
- 24 meeting, we did a series of direct push transects
- 25 across this plume, the purpose of which was to

- 1 refine and get a -- gain even more confidence in
- 2 what that edge of the plume looks like.
- 3 And as we briefed in December from our
- 4 sampling that we had done in October, that so far
- 5 our sampling shows that -- it really raised our
- 6 confidence a lot. I love briefing this part of it,
- 7 really raised our confidence that the pictures that
- 8 we've been drawing of the edge of the plume is
- 9 pretty accurate.
- 10 But we weren't completely satisfied with
- 11 just that -- that phase of sampling. That first
- 12 phrase not only did raise our confidence, but it
- 13 also provided us additional information so that we
- 14 could go back and take additional transects.
- 15 Let me go over here just to kind of show
- 16 you. It may be hard to catch this on camera, I
- 17 apologize, but I would like to point out, you can
- 18 come here after the meeting or during a break or
- 19 something to show exactly where all these transects
- 20 are that we 've pushed across the plume so you can
- 21 get an idea of the spacing between sampling points
- 22 and between the crosscut of the plume.
- Now, there's a -- we're collecting a lot
- 24 of data and not only across and down but each of the
- 25 sampling points also goes to three depths, so that

1 when we're done we'll have a very confident picture

- of what that eastern plume looks like, both at the
- 3 extent and the depth, and when we -- we issue our
- 4 report on the data sometime around June, we'll
- 5 even -- we're going to experiment with even
- 6 depicting it with some cutaway views of what the
- 7 plume might look like in depth. It just gives us a
- 8 better picture of what -- what it would look like.
- 9 CHRIS FUNK: How far down do those lines
- 10 go?
- 11 GARTH ANDERSON: We went -- it's kind of
- 12 hard to see on this map, but we've taken transects
- 13 all the way down to the end of the plume and even --
- 14 I'll come over here.
- 15 CHRIS FUNK: South of EW-1?
- 16 GARTH ANDERSON: Right. We've even gone
- 17 south of EW-1 to here, so we've done them here and
- 18 all the way up the plume like that.
- 19 LYNN MOORER: How far south?
- 20 GARTH ANDERSON: Lisa, what's our furthest
- 21 southern transect precisely?
- 22 LISA THOLL: Lisa Tholl, URS, I'd say it's
- 23 probably --
- 24 GARTH ANDERSON: Tell me when to stop.
- 25 LISA THOLL: Keep going, about right

- 1 there.
- 2 SCOTT MARQUESS: Is that County Road F?
- 3 GARTH ANDERSON: That is -- yeah, that's
- 4 County Road F, and right now we are in the middle of
- 5 doing our Phase 2 sampling.
- 6 It's looking kind of grim for doing any
- 7 sampling tomorrow because the fields might be just a
- 8 bit muddy, but -- and we appreciate everyone's
- 9 cooperation in allowing us access to your property
- 10 so that we can collect this valuable information.
- 11 One of the other products that will come
- 12 out of this now that we have a good, confident
- 13 picture of the plume is this will help us to put --
- 14 install new monitoring wells along the eastern side
- of the plume so that we can not only know where the
- 16 plume is, but we'll have a monitoring system in
- 17 place to make sure that nothing does move, or if it
- does move, which we don't believe it will, that we
- 19 would know about it very early in the process.
- 20 And, again, we appreciate everyone's
- 21 cooperation in allowing us onto their property, and
- 22 we're working as hard as we can to get finished
- 23 before any planting starts.
- 24 What other activities, we had a special
- 25 RAB meeting on March 23rd, just two weeks ago, to

1 talk about groundwater modeling; we had a good

- 2 turnout for that.
- 3 Containment evaluation, what is this, it's
- 4 our work plan to -- to better evaluate how
- 5 successful our groundwater containment system is.
- 6 We're proposing a methodology to EPA and to NDEQ,
- 7 how to best measure the effectiveness of the
- 8 containment system.
- 9 When we talk about the containment
- 10 systems, it's all the extraction wells tied in with
- 11 the treatment plant designed to keep this plume from
- 12 getting any larger, because that's our first order
- of business is to keep the plume where it is.
- But in order to determine how successful
- 15 we are, we have to do a lot of -- we have to come up
- 16 with lots of different ways to measure the
- 17 effectiveness of the system both through hydraulics;
- 18 in other words, looking at groundwater levels to
- 19 find out how effective our pumping is in capturing
- 20 the plume; we use other information of contamination
- 21 or sampling monitoring wells to make sure that the
- 22 contamination has not spread, we use groundwater
- 23 modeling to do predictions and to see how well the
- 24 real world correlates to our groundwater model.
- 25 There are a number of factors that go into

1 the -- into the containment evaluation plan to

- 2 determine how successful we are.
- 3 An important element of the containment
- 4 evaluation work plan is the so-what question, okay.
- 5 We -- if we take measurements and based on our
- 6 criteria determine that we're out of containment
- 7 what do we do then? Just measuring it doesn't do
- 8 you any good unless you have some kind of response
- 9 action.
- 10 So we were also going to be proposing some
- 11 general response actions to what happens if the
- 12 plume does go out of containment, which we don't
- 13 believe it will because we have a pretty high level
- of confidence, but we don't like to dismiss it; we
- 15 want to ensure that things are in place and thought
- of if some type of contingency arises, how would we
- 17 respond to that.
- 18 MELISSA KONECKY: Garth, have you guys
- 19 ever agreed on a definition of containment?
- 20 GARTH ANDERSON: That's part of this plan.
- 21 The work plan that we have submitted to EPA and NDEQ
- 22 outlines what we think are the criteria for
- 23 maintaining containment.
- 24 EPA and DEQ are reviewing that plan, and
- 25 they'll provide our comments and we'll sit down and

- 1 continue to work out what those -- what those
- 2 criteria and what those factors are for successful
- 3 containment.
- 4 MELISSA KONECKY: Because it just seems
- 5 that either it would be in containment or not. I
- 6 mean, do you have a definition?
- 7 GARTH ANDERSON: I wish there was a simple
- 8 definition, but there are we what call multiple
- 9 lines of data, multiple lines of information that
- 10 determine when you're in containment.
- 11 As I mentioned before, we have -- we have
- 12 the hydraulics of the groundwater, we have the
- 13 measurement of the actual contamination to make sure
- 14 it's not moving, and other factors.
- 15 LYNN MOORER: Mr. Anderson?
- GARTH ANDERSON: Yes.
- 17 LYNN MOORER: I have one more follow-up
- 18 question. Lynn Moorer again.
- 19 You issued a containment evaluation work
- 20 plan in March.
- 21 GARTH ANDERSON: Yes.
- 22 LYNN MOORER: I note that Mr. Marquess
- 23 sent you a message after receiving that and
- 24 indicated -- I had understood based -- well, quote,
- 25 I had understood based upon our discussions that the

- 1 work plan would include some sort of working
- 2 definition of, quote, containment, closed quote,
- 3 much like we have been pondering for defining,
- 4 quote, impact, closed quote. I haven't come across
- 5 a definition of containment in the work plan; is it
- 6 included?
- 7 Did you get an answer to your question,
- 8 Mr. Marquess? Is there a working definition in the
- 9 work plan is the second question?
- 10 SCOTT MARQUESS: Just to give a little
- 11 context, I sent that message -- I had not reviewed
- 12 the plan yet, so that was my first reading, first
- 13 blush at what I had seen or glanced at.
- I would say we provided comments to the
- 15 Corps this week, and this week I sent comments to
- 16 the comprehensive review of the work plan, and, you
- 17 know, there are things in our estimation that will
- 18 need to be revised in the plan to make it
- 19 satisfactory in terms of the working definition of
- 20 containment or however we're going to evaluate the
- 21 performance of the remediation system.
- 22 LYNN MOORER: So to reiterate my question,
- 23 is there a working definition of containment at this
- 24 point?
- 25 SCOTT MARQUESS: Well, there's not a final

document at this point, so there's a document that's

- 2 in review that we've offered comments and
- 3 suggestions and things that we think need to be
- 4 revised in order to make the containment evaluation
- 5 work plan more complete or to our satisfaction.
- 6 LYNN MOORER: Would you be so kind as to
- 7 summarize for us or paraphrase for us where the
- 8 working -- what the working definition of
- 9 containment is right now?
- 10 SCOTT MARQUESS: I really -- I don't know
- 11 that I could do an adequate job of that. I can tell
- 12 you --
- 13 LYNN MOORER: Well, could someone from the
- 14 Corps do that?
- 15 SCOTT MARQUESS: One thing I can tell you
- 16 that the ROD addresses -- and Garth talked about
- 17 multiple lines of evidence.
- 18 Well, I mean, the way we would look at
- 19 containment would include a chemical monitoring
- 20 component, which is, you know, the outline of the
- 21 plume based on remediation goals that have been
- 22 established, a chemical and a hydraulic component.
- The chemical is pretty straightforward,
- 24 and I think the ROD defines it to some extent, that
- 25 the plume is -- the ROD says the plume -- the goal

- 1 of the hydraulic containment system is that the
- 2 plume not move from its ROD depicted boundaries.
- 3 So that's one important thing, that's --
- 4 and that's pretty easy to -- relatively easy to
- 5 assess cut and dry; is the line -- or is -- is
- 6 contamination beyond the line above our remediation
- 7 level.
- 8 LYNN MOORER: Say --
- 9 SCOTT MARQUESS: Does contamination exist
- 10 beyond the ROD depicted boundaries at levels
- 11 exceeding our remediation goals; 5 for TC and 2 for
- 12 RDX, so that's one working definition that we would
- 13 want to see specified that we're going to evaluate
- 14 the performance of the remedy relative to that.
- 15 Everything else in terms of hydraulics
- 16 gets a lot more complicated, and I don't really feel
- 17 I'm very capable of describing it in detail.
- 18 LYNN MOORER: Is there somebody from the
- 19 Corps who wants to jump in since it's your plan?
- 20 GARTH ANDERSON: We didn't come prepared
- 21 to talk about the containment evaluation work plan
- 22 tonight, so not tonight, but it's certainly a great
- 23 topic for a future RAB meeting.
- 24 LYNN MOORER: We'd appreciate you
- 25 following up as you promise to do after each meeting

1 to respond to the unanswered questions, so we would

- 2 like to have that responded to specifically.
- 3 GARTH ANDERSON: Okay. Let me --
- 4 LYNN MOORER: Thank you.
- 5 GARTH ANDERSON: Cathi, can you write that
- 6 up on the flip chart, please, make sure -- that
- 7 green box has -- right here.
- 8 We will certainly do that, and as we work
- 9 out the agenda for the next RAB meeting that sounds
- 10 like it could be a good topic, but we'll obviously
- 11 figure that out.
- 12 LINDA WAGEMAN: Garth, I've got a
- 13 question.
- GARTH ANDERSON: Yes.
- 15 LINDA WAGEMAN: This is Linda Wageman.
- There are 1,249 superfund sites
- 17 specifically containing groundwater. I don't
- 18 understand, help me to understand why we don't have
- 19 a definition of containment.
- 20 This seems -- I mean, this is something
- 21 that the Corps has been doing for a million years;
- 22 defining groundwater containment in conjunction with
- 23 superfund sites is not new.
- So why is it that when we or another
- 25 regulator asks for a definition, I would think that

- 1 that definition would have been laid out
- 2 specifically. Help me to understand why there was
- 3 no definition for a containment because --
- 4 GARTH ANDERSON: That's a fair question.
- 5 We have had working definitions of containment.
- 6 We've been working with principally the -- doing the
- 7 chemical monitoring along the south. Do we find
- 8 anything south or east or anywhere else around the
- 9 plume; if the containment hasn't spread that's a
- 10 good working definition.
- 11 What we're attempting to do with this
- 12 containment evaluation work plan is improve not only
- 13 our definition of containment but to have more --
- 14 have better ways of measuring and grading our -- our
- 15 containment.
- 16 LINDA WAGEMAN: So basically then what
- 17 you're stating is the definition of containment
- 18 isn't necessarily the issue; it's the measurement of
- 19 the containment or the measurement to define what --
- 20 what those containment perimeters are; is that
- 21 correct?
- 22 GARTH ANDERSON: Yes.
- 23 LINDA WAGEMAN: Okay. So if we know that
- 24 in the ROD, the way the plume is sitting right now,
- 25 it is not in containment in accordance with the ROD

1 because the plume has moved outside of 5 and 2, so

- 2 we know that in accordance with the ROD it is not in
- 3 containment.
- 4 So now what we need to do is we need to
- 5 run a measurement saying what, since the ROD we've
- 6 been out of containment X amount and this is where
- 7 and this is why and this is how we're going to fix
- 8 it, or we're out of containment to this degree and
- 9 this level and this is how we're going to make sure
- 10 that we don't get out of containment to this degree
- and to this level and in this arena; am I right?
- 12 GARTH ANDERSON: Well, I believe there
- 13 were two questions in there.
- 14 LINDA WAGEMAN: Yes, there are.
- 15 GARTH ANDERSON: Yes, first, we want to
- 16 ensure that we stay in containment henceforth and
- 17 forever more, and there are ways to -- that we want
- 18 to measure that, both through chemical, hydraulic
- 19 and modeling.
- 20 Modeling is a tool, modeling is never the
- 21 final answer to anything, and what do we do if we
- 22 are out of the containment. And --
- 23 LINDA WAGEMAN: Assuming, of course --
- 24 because once again we have to make the understanding
- 25 that when you say in containment, against what?

- 1 Against the ROD?
- 2 Because if we're looking at the ROD and
- 3 saying we're still in containment, that's a fallacy
- 4 because in accordance to the ROD we are not in
- 5 containment. So where is the benchmark to decide
- 6 containment, and then from there where are the
- 7 perimeters that you measure?
- 8 GARTH ANDERSON: Well, I wouldn't
- 9 necessarily agree with the statement we're not in
- 10 containment now.
- 11 SCOTT MARQUESS: May I take it?
- 12 LINDA WAGEMAN: Load Line 1.
- 13 SCOTT MARQUESS: Absolutely.
- 14 LINDA WAGEMAN: It's an honest question.
- 15 GARTH ANDERSON: And we acknowledge that
- 16 Load Line 1 was out of containment, no question
- 17 about that, we've agreed about that for a while.
- In concert what we're saying in our
- 19 proposal is that when we do find ourselves out of
- 20 containment, and this one is a pretty obvious case,
- 21 what kind of response actions would we undertake to
- 22 get us back into containment.
- 23 And once we -- once we complete all of our
- 24 sampling and we've run this -- this system for a
- 25 short period of time, then we're confident that we

- 1 have achieved a containment.
- 2 LINDA WAGEMAN: So what's your benchmark
- 3 then for containment?
- 4 GARTH ANDERSON: Both the chemical and the
- 5 hydraulic measurements of the extraction well.
- 6 LINDA WAGEMAN: For what date, just the
- 7 current measurements, or help me out here?
- 8 SCOTT MARQUESS: I think the answer you
- 9 may be looking for may be the ROD.
- 10 LINDA WAGEMAN: Oh, gosh, I hope not.
- 11 SCOTT MARQUESS: Well, it's -- well, I
- 12 think that map there generally depicts what's
- 13 different now relative to the ROD.
- I think Load Line 1, the yellow area, the
- 15 ROD -- the yellow area is beyond what was identified
- in the ROD, okay, so the corrective action has been
- 17 install two extraction wells, EWs-12 and 13 to the
- 18 south, and follow on focused extraction with EW-11
- in the heart of the plume starting this year, work
- 20 to do.
- 21 LINDA WAGEMAN: So then your benchmark is
- 22 going to be based on the data from EW-12 and 11 --
- 23 or 12 or 13, whatever the magic number is, starting
- 24 this year; that's going to be your benchmark, your
- 25 jumping-off point? Yes, no?

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1 SCOTT MARQUESS: I think that's fair.
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- 2 LINDA WAGEMAN: Okay. That is --
- 3 SCOTT MARQUESS: Also relative to the ROD,
- 4 I think just south of the blue, that's new, and I
- 5 think that's -- I mean, that was specifically
- 6 allowed for in the design of the system.
- 7 But that it was intended that if -- if the
- 8 line -- you know, where the blue line where
- 9 Garth was pointing was that the ROD -- there was
- 10 never any intention in the -- in the approved
- 11 remedial design, remedial action that that
- 12 contamination wouldn't go from the blue line to the
- 13 edge of the pink line because that's where the wells
- 14 were put in.
- 15 LINDA WAGEMAN: So once again, your
- 16 benchmark would be at the end of that pink line to
- 17 establish a measure of containment?
- 18 SCOTT MARQUESS: Yes.
- 19 LINDA WAGEMAN: Starting in 2006?
- 20 SCOTT MARQUESS: Shouldn't be anything
- 21 beyond EWs -- no, the yellow or the pink --
- 22 LINDA WAGEMAN: Okay. And that's --
- 23 SCOTT MARQUESS: -- or the purple, to the
- 24 east.
- 25 LINDA WAGEMAN: Okay. And that is

- 1 starting in 2006?
- 2 SCOTT MARQUESS: Correct. And --
- 3 LINDA WAGEMAN: And that is going to be
- 4 your benchmark for containment starting now?
- 5 SCOTT MARQUESS: Yes.
- 6 LINDA WAGEMAN: Okay.
- 7 SCOTT MARQUESS: And the rest -- I just
- 8 want -- the rest of the equation is what makes it
- 9 difficult or what makes it hard isn't as much the
- 10 chemical part, excuse me.
- 11 LINDA WAGEMAN: This is a really bad night
- 12 for a meeting like this.
- 13 SCOTT MARQUESS: You're telling me.
- 14 LINDA WAGEMAN: We want beer.
- 15 GARTH ANDERSON: Lead the way, Linda, lead
- 16 the way. If we would have paid another 25 bucks
- 17 we'd have been able to bring it in.
- 18 SCOTT MARQUESS: But the hard part isn't
- 19 as much the chemical part, although there's a matter
- 20 of the sufficiency and the density of the monitoring
- 21 network, which needs to be improved; the harder part
- 22 is the hydraulic part, which is cheaper information.
- 23 You can -- and you can get it more
- 24 frequently, but it's a lot harder to interpret, and
- 25 that's kind of where the rub comes, what makes it

1 more difficult to say, all right, well, how much --

- 2 how much lower should the elevation of Well X be
- 3 compared to Well Y to say that we have gradient in
- 4 the right direction on a regular basis.
- 5 So -- but we want to have both the
- 6 chemical and the hydraulic component because we --
- 7 the more tools and the more things we have to find,
- 8 the more information we can get; we can get more
- 9 hydraulic information, we can get chemical
- 10 information, so we want to take advantage of that.
- 11 LINDA WAGEMAN: Oh, okay.
- 12 GARTH ANDERSON: Great. All right. One
- other -- one other thing that we're -- yes, Lorus.
- 14 LORUS LUETKENHAUS: Lorus Luetkenhaus.
- 15 GARTH ANDERSON: How are you doing?
- 16 LORUS LUETKENHAUS: Just great.
- 17 I've got a friend, his definition of
- 18 getting the dishwasher loaded is to get his wife drunk.
- We've been on this now, August 30th, 205
- 20 (sic) we were talking about this, this is now
- 21 April 206 (sic), six months later, and we still
- 22 don't have a definition.
- Now, I know the government is slow, but,
- 24 see, that's kind of the problem here with you
- 25 people. You putts around and putts around and you

- 1 don't get anything done. You're still talking
- 2 about -- I haven't heard a promise that you'll have
- 3 it at the next meeting. Would you promise me that,
- 4 that's the question?
- 5 GARTH ANDERSON: What promise are you
- 6 looking for?
- 7 LORUS LUETKENHAUS: A working definition
- 8 of what you mean by containment.
- 9 GARTH ANDERSON: Well, we are still --
- 10 we'll still be in a -- I would hope we would, but
- 11 I'm not going to guarantee you anything because we
- 12 want to be sure that the three agencies are in
- 13 agreement with what the definition of containment
- 14 is. We're confident that we'll be there by then,
- 15 but -- if all goes according to our schedule.
- LORUS LUETKENHAUS: Thank you.
- 17 GARTH ANDERSON: You're welcome.
- One thing we are pretty excited about and
- 19 we briefed it in the past is the site management
- 20 plan. As you recall, in -- we briefed it -- we
- 21 mentioned it a couple of times, but what we've
- 22 developed is an overall management strategy for the
- 23 entire site.
- Now, we're about a week from finishing
- 25 that, tying the bow on it, having it ready for prime

- 1 time. The site management plan contains all the
- 2 elements that we -- that we talked about: Operation
- 3 of the treatment system and the extraction wells,
- 4 the groundwater monitoring program, additional
- 5 investigations in the interior of the plume; just
- 6 all the different aspects of the -- of the project
- 7 from now through at least 2010.
- 8 It comes with a scope of the work and the
- 9 products and the different documents that will be
- 10 delivered, the corresponding schedule and even a
- 11 little bit of cost data so you can see what -- you
- 12 know, how much this whole operation does cost.
- So we -- we're -- again, we're excited
- 14 about this because we've gotten to the end point,
- 15 something that all three agencies agree on, and we
- 16 think it'd be a great topic to go into some detail
- 17 at a future meeting once it's all tied up and ready
- 18 to go.
- 19 LYNN MOORER: Excuse me, Mr. Anderson?
- 20 GARTH ANDERSON: Yes.
- 21 LYNN MOORER: Lynn Moorer again.
- When the site management plan is finalized
- 23 will you put it in print large enough to read
- 24 without a large magnifying glass?
- 25 GARTH ANDERSON: We can -- we can -- would

- 1 you like that size? We can --
- 2 LYNN MOORER: Large enough to read without
- 3 a magnifying glass.
- 4 GARTH ANDERSON: We will provide both in
- 5 paper and those that prefer electronically, we'll
- 6 have that as well.
- 7 LYNN MOORER: That's not the question I
- 8 asked, Mr. Anderson, respectfully.
- 9 GARTH ANDERSON: We will --
- 10 LYNN MOORER: I've been going blind
- 11 looking at what you've been submitting. It is the
- 12 tiniest print I've ever seen, and its basically
- 13 impossible to print out and analyze it in any
- 14 sensible fashion.
- So, again, my question is: Will you
- 16 provide that in print large enough to read without a
- 17 magnifying glass?
- 18 GARTH ANDERSON: Yes, it'll be a lot
- 19 thicker because it'll be a lot more pages, but we
- 20 can do that.
- 21 LYNN MOORER: Will you do it?
- GARTH ANDERSON: Yes.
- 23 LYNN MOORER: We'll hold you to it. Thank
- 24 you.
- 25 GARTH ANDERSON: Okay. Let's move on.

1 Right now Mary Lyle is going to step up

- 2 and talk in some detail about a lot of the
- 3 groundwater sampling that we've been doing, as
- 4 promised in the last meeting.
- 5 Again, I would like to point out that we
- 6 are talking about third quarter 2005, which was
- 7 generally September; fourth quarter, which was
- 8 generally December; and then again what the plan is
- 9 for all of 2006.
- 10 And, again, these maps are difficult to
- 11 brief from because there's a lot of detail on them,
- 12 so anybody that wants to stick around, we'll be more
- 13 than to happy to go over specific data questions,
- 14 any specific questions about the groundwater
- 15 sampling plan, or any of the -- any of the results
- 16 that we've published so far.
- 17 So anyway, without further ado, Mary.
- 18 MARY LYLE: Thanks, Garth.
- 19 As Garth mentioned, we wanted to talk
- 20 first about September third quarter sampling,
- 21 because at the last RAB meeting we hadn't finished
- 22 validating all of the data yet.
- 23 So as the slide indicates, we've sampled
- 24 monitoring wells, residential wells and surface
- 25 water location in September.

1 The data that we saw had been fairly

- 2 consistent with what we've seen before. The
- 3 detections above the action levels were within the
- 4 plume boundaries, and those below were outside, so
- 5 as I said, fairly consistent with what we had
- 6 before.
- 7 We distributed those letters. It was to
- 8 the well owners before the RAB, and -- but it wasn't
- 9 until January that we were able to post the
- 10 quarterly data on the web site.
- 11 And as you came in here we had a CD of the
- 12 September sampling data tables, all the results, and
- 13 the reason we put it on CD was because the package
- 14 was 300 pages with all the tables and everything in
- 15 there, so if you'd rather have a paper copy let me
- 16 know. I can stick it in the mail when we get back
- 17 out, but that was what we brought this time.
- 18 Next slide, please, Garth.
- In December we sampled again, and that was
- 20 shortly after the last RAB. Again, it was
- 21 monitoring wells, water supply wells and surface
- 22 water locations, and, again, the results were fairly
- 23 consistent with what we had seen in the past.
- Just about a week or so ago we had sent
- 25 out the results to the well owners, so if you

1 haven't seen yours let me know, we can double-check

- 2 on that and answer any questions on that.
- 3 The December data was in a paper copy back
- 4 on the table if you wanted to look at the -- take
- 5 that home with you, and just yesterday or this
- 6 morning we posted that on the web site so it's also
- 7 available there.
- 8 CHRIS FUNK: Do you know, was my lake
- 9 sampled in one of those two samples?
- 10 MARY LYLE: The ski lake, are you asking
- 11 about the ski lake?
- 12 CHRIS FUNK: Yes.
- 13 MARY LYLE: I believe we sampled that last
- 14 summer, July. Have you -- have you not seen that
- 15 data?
- 16 CHRIS FUNK: No.
- 17 MARY LYLE: Okay. I apologize, we'll
- 18 definitely get that out. We can even talk to you
- 19 here after -- afterwards, but we have sampled that.
- 20 We have -- we do have that data, and I apologize
- 21 that we haven't sent that out to you.
- MELISSA KONECKY: Would you be able to
- 23 summarize the results of the third quarter and the
- 24 fourth quarter separately?
- I noticed in this fourth quarter stuff

1 that was e-mailed, you know, there were a few really

- 2 high results in a couple of the wells, and I'd have
- 3 to find the page, but --
- 4 LYNN MOORER: Talk about them.
- 5 MELISSA KONECKY: Yeah, like --
- 6 MARY LYLE: Well, yeah, I guess I can -- I
- 7 don't have the -- I need to look at the data tables
- 8 myself too. Off the top of my head I don't know
- 9 that.
- 10 GARTH ANDERSON: Ms. Konecky, do you have
- 11 a specific question that you'd like us to address?
- 12 MELISSA KONECKY: Well, I noticed that
- 13 there were a couple of water supply wells that were
- 14 particularly high in TCE, and then I noticed -- and
- 15 I have to find the pages, but some of those surface
- 16 water results were really high too, and I'll have to
- 17 find the page just so I have the specifics.
- 18 GARTH ANDERSON: All right. I think we
- 19 can talk about surface water real quick because we
- 20 actually discussed that earlier this afternoon among
- 21 our party, but Mary, if you can --
- MARY LYLE: Sure. The ones that we see,
- 23 the detections that are consistent are SW-6, which
- 24 is right here inside the plume in Johnson Creek,
- 25 SW-8; those are probably the ones that are high.

1 Around 40 and 50 are what we've been seeing in the

- 2 last probably year and a half that we've been out
- 3 there; is that right, Brady?
- 4 BRADY BIGELOW: Yeah.
- 5 MARY LYLE: We also had some detections in
- 6 SW-10, which, again, is within the plume, so it
- 7 would be -- we've seen those above action level, and
- 8 then we've had some lower level detections again
- 9 below action levels in SW-12, which is down here
- 10 south of EW-1.
- 11 GARTH ANDERSON: One thing we would like
- 12 to point out when we talk action levels, the surface
- 13 water is different than groundwater.
- 14 Surface water -- although there's not a
- 15 specific action level right now for surface water,
- 16 it's one that we're developing based on a risk
- 17 assessment, but -- so when we talk above action
- 18 level, we generally talk about the groundwater
- 19 level, but the surface water is -- it's typically higher
- 20 than the drinking water standard.
- 21 CHRIS FUNK: Have you ever tested Johnson
- 22 between where it runs out of the plume and through
- 23 not plume and then back into the plume?
- 24 MARY LYLE: We --
- 25 CHRIS FUNK: Down farther, like right

- 1 across from my house. Yep.
- 2 MARY LYLE: We have -- we've tested 4 and
- 3 5 about a year and a half ago, and we didn't see
- 4 detections at levels that were -- I guess, Brady, you
- 5 might want to pull that data up for SW-4 and 5.
- 6 GARTH ANDERSON: We'll have Brady run
- 7 that number, and we'll get you a level here
- 8 before the end of the meeting.
- 9 MARY LYLE: To answer your question
- 10 about -- I think when we started this was November
- of 2004, we sampled -- there were 12 along --
- 12 13 actually along Johnson Creek and Clear Creek,
- 13 started way up here, SW-1, and then we sampled about
- 14 six locations over here in Silver Creek.
- 15 And that was kind of our baseline, and we
- 16 kind of -- we've trimmed down to -- to the ones that
- 17 we saw -- we've seen more consistent detections in,
- 18 but every year when we reevaluate the groundwater
- 19 monitoring plan, we also reevaluate sampling of
- 20 surface water.
- 21 So as we see data in some of these wells
- 22 around these other surface water locations that --
- 23 that would warrant us going out there, we would
- 24 certainly add surface water locations and more frequent
- 25 sampling of some of those others.

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1 LINDA WAGEMAN: Linda again.
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- In these meetings a long time back when we
- 3 started talking about surface water and then we also
- 4 talked about action levels and the difference
- 5 between above action levels and below action levels;
- 6 I think that the group here made it abundantly clear
- 7 that we're not remotely interested in the phrase
- 8 below action levels. That means nothing to me.
- 9 I'm interested in the variance percentage
- 10 on your -- on your monitoring. I don't care if it's
- 11 below action level. I want to know what the
- 12 variance is, and I want to know when, I want to know
- 13 the month that it's been tested in so that I can go
- 14 in and I can check year by year by year and track
- 15 it.
- Okay. Which, A, I shouldn't have to do,
- 17 but I'll do, so my question to you, Garth, is:
- 18 What's the variance on EW-10? Okay, granted it's
- 19 below action level, I don't have my data in front of
- 20 me unfortunately, but what are we looking at?
- 21 GARTH ANDERSON: Well, we can certainly
- 22 answer that question, that's why we have the
- 23 database, and it's a familiar conversation.
- We -- we love the database. It's a very
- 25 easy query to do, so any specific questions that

1 people have regarding data, whether it's a variance,

- 2 a trend, historical data, we have it in here so we
- 3 can run that.
- 4 LINDA WAGEMAN: I appreciate the fact that
- 5 you've got all this data, I think that's awesome.
- GARTH ANDERSON: Okay.
- 7 LINDA WAGEMAN: I'm very pleased to hear
- 8 that, but I'm not going to go out and seek it; it's
- 9 your responsibility to provide it to me. I pay you
- 10 to do that job, I expect that job to be done, and
- 11 unless you people put me on salary to what I am
- 12 almost going to demand here pretty soon, plus
- 13 benefits and a good pension plan, I'm not going to
- 14 do it.
- You know, as far the questions and stuff,
- 16 I'll be more than happy to do that.
- 17 GARTH ANDERSON: Got it, thanks.
- 18 LINDA WAGEMAN: -- and I'll take --
- 19 GARTH ANDERSON: We appreciate that offer.
- 20 LINDA WAGEMAN: -- responsibility, yes,
- 21 but as far as this below action level stuff, don't
- 22 ever come to this meeting again in my presence and
- 23 have the audacity to say below action level or above
- 24 action level.
- I want to know specifically what, because

1 anything beyond that is not satisfactory. I should

- 2 not have to repeat myself. I don't like to, it's
- 3 not right.
- 4 So once again, when we're talking about
- 5 EW-10, I'm glad to hear it's below action level;
- 6 don't remotely care. I want to know what it was,
- 7 what it is, what the variance is, what is the
- 8 percentage, and when specifically, you know, when
- 9 you're comparing these variances, what months are
- 10 you comparing it to.
- 11 GARTH ANDERSON: I assume you're talking
- 12 SW-10, surface water sample, not EW?
- 13 LINDA WAGEMAN: Right.
- 14 GARTH ANDERSON: Understand, I think it's
- 15 a great -- great thing to look at, and for tonight,
- 16 we'll have Brady Bigelow run that number just
- 17 to --
- 18 LINDA WAGEMAN: Can we start putting --
- 19 I'm really trying to make a point here because we
- 20 are trying to get detail.
- Once again, we've got MUD pumping, once
- 22 again, the surface water goes into the Platte, okay,
- 23 which is a federally protected river; how about next
- 24 RAB and every RAB going forward, when we have these
- 25 results, maybe we can put something in there to that

1 effect because if you're tracking this plume you're

- 2 going to have that data anyway.
- 3 GARTH ANDERSON: That is one thing we do
- 4 take into consideration when we're looking at data.
- 5 We look at data trends to determine the frequency of
- 6 a particular well. If something's been holding
- 7 steady for ten years then maybe you cut the
- 8 frequency back a little bit.
- 9 LINDA WAGEMAN: EW-10 has not been holding
- 10 steady.
- 11 GARTH ANDERSON: I understand, I'm talking
- 12 in general. If we see -- if we see a data point,
- 13 whether it's a well or a surface water point, and we
- 14 see an increase in trend, then that would be a sign
- 15 to us to either increase the sampling frequency or
- 16 try to figure out why it's increasing.
- 17 LINDA WAGEMAN: Until you come to this
- 18 meeting and then you tell us it's below action
- 19 level, and so, see, we need to understand the
- 20 difference because not everybody here ponders over
- 21 the reports like sick-warped me, okay, not everybody
- 22 does that.
- So, you know, we need to stop providing a
- 24 false sense of security, and let's provide some
- 25 honesty and say that this is kind of what we found,

- 1 you shouldn't be worried about it, and this is why,
- 2 and that'll give us a much greater comfort level
- 3 than below action level, because I don't trust below
- 4 action level.
- 5 GARTH ANDERSON: Okay.
- 6 MELISSA KONECKY: When you guys take these
- 7 surface water samples do you do it the same way like
- 8 the NRD goes out and takes like a sample from the
- 9 stream, from each -- you know, from the middle and
- 10 the sides, or do you go out into the lake and just
- 11 take a sample from the same point each time or --
- 12 MARY LYLE: It is the same point each
- 13 time.
- 14 MELISSA KONECKY: Like a lake or whatever?
- MARY LYLE: In the creek we have a gauge
- 16 where we mark where we've sampled previously, so
- 17 we'll go out and try to, as close as possible,
- 18 repeat that very same sample every quarter.
- 19 MELISSA KONECKY: You know, I noticed like
- 20 it looks like there's a lot of vinyl chloride in
- 21 some of these samples of surface water, and I wasn't
- 22 sure, you know, what -- what numbers -- you know,
- 23 where the points referred to, but, I mean, I'm sure
- 24 it's way above action levels according to my sheet I
- 25 printed out from the EPA.

- 1 MARY LYLE: I'll have Brady run that.
- 2 I'm not familiar with the vinyl chloride.
- 3 CHRIS FUNK: So when you say it's above
- 4 action level, what do you do; what action are you
- 5 taking?
- 6 MARY LYLE: Well, actually it starts --
- 8 there's -- probably shouldn't use the term action
- 9 level on surface water right now anyway because
- 10 there is no established action level.
- 11 In fact, the only regulatory limit right
- 12 now that the -- you know, for state water quality is
- 13 higher than we would even be comfortable with, so
- 14 what we're doing is working with EPA to run --
- 15 determine a level based on realistic exposure and
- 16 realistic use of the stream and how people would be
- 17 exposed to that contamination to determine what --
- 18 what level would be -- would not cause elevated
- 19 risk.
- 20 So right now that level is -- we're in the
- 21 same -- the preliminary calculation kind of showed
- 22 the same order of magnitude as what we're seeing as
- 23 kind of a screening level, but we're going to get
- 24 more definition on that as we work with EPA to
- 25 develop that.

- 1 LYNN MOORER: Mr. Anderson.
- 2 GARTH ANDERSON: Yes.
- 3 LYNN MOORER: Lynn Moorer again.
- 4 I would respectfully request yet again
- 5 that whenever the Corps presents the results, which
- 6 we're anxious to hear at each of the RAB meetings as
- 7 to the latest sampling that you have done, please be
- 8 prepared to tell us specifically the chief findings
- 9 each time.
- 10 Now, sometimes you have done it. I recall
- 11 that you -- sometimes you'll give us a list of what
- 12 the chief findings are. Like, for example,
- 13 December 2004 when you found the 12 of TCE in SW-11
- in Clear Creek; we want to know the chief findings.
- 15 It's not helpful, it's meaningless to us
- 16 to say as you do there on both of your slides,
- 17 results correlate to historic concentrations; I'm
- 18 sorry, that really is pretty meaningless, especially
- 19 for folks who are here for the first time at this
- 20 meaning.
- 21 We've asked you previously, Ms. Konecky,
- 22 RAB co-chair, has asked you specifically on repeated
- 23 occasions, please come prepared to the meetings at
- 24 least to give us a snapshot of the chief detections,
- 25 the chief findings for each of your quarters. We'd

- 1 like you to do that, please do that.
- 2 GARTH ANDERSON: When we talked to --
- 3 again, this is going to be a regular feature at
- 4 every RAB meeting. We shifted everything by a month
- 5 so that as our quarterly sampling results come in,
- 6 it's -- it correlates to a RAB meeting.
- 7 So the July RAB meeting will be a little
- 8 more specific. We'll still come with lots of --
- 9 with maps to talk from, the database and all the
- 10 rest, but our brief and slide, we'll try to
- 11 highlight some more specifics findings; that should
- 12 not be difficult.
- 13 LYNN MOORER: Thank you. I just want to
- 14 note for folks who might be interested to know, you
- 15 may remember at least a couple meetings ago we had
- 16 quite a discussion about the Artesian Well, it's
- 17 Mr. Dending's property, and there was a big concern
- 18 about whether or not at the action level -- it was
- 19 approaching action level and then it went up to 5,
- 20 well, the -- I think one of the chief things that
- 21 folks might want to know is then the fourth quarter
- 22 2005 result is now -- it's at 13, 13.7, at that
- 23 Artesian Well.
- 24 GARTH ANDERSON: Mary, can you point to
- 25 where the Artesian Well is so people can get --

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1 LYNN MOORER: Yeah, Mr. McReynolds would
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- 2 like to have you explain why that happened, why that
- 3 increased; why it's now at 13.7 when it was roughly
- 4 at about 5? I'd say it was at least two meetings
- 5 ago, maybe a little longer ago than that.
- 6 MARY LYLE: Well, that well is actually
- 7 located within the plume, and it's just been a few
- 8 years that we've actually been sampling it, so it's
- 9 just a shifting of -- of the water over in this
- 10 area.
- 11 And just to clarify that, that is an
- 12 irrigation well, and the owner is not using that as
- 13 a potable well, so we've -- you know, we've been
- 14 monitoring that so that they -- so that that is not
- 15 used as a potable source.
- And, as I said, it's -- it is within the
- 17 plume, so it's not unlikely that we would see
- 18 concentrations in -- in that well that are above two
- 19 parts per billion.
- 20 LYNN MOORER: I think the question,
- 21 Ms. Lyle, is why is it increasing and at the rate
- 22 that it is increasing?
- 23 SCOTT MARQUESS: I'll hazard a guess.
- 24 GARTH ANDERSON: Scott, take it away.
- 25 SCOTT MARQUESS: All right. Generally,

1 you know, contamination is flowing north to south,

- 2 we have source areas in the north. I'll just -- I
- 3 mean, you should expect to see contamination mass
- 4 moving north to south over time either to the
- 5 extraction wells in the main part of the RDX plume,
- 6 same thing everywhere; that's the way it's going to
- 7 work.
- 8 So if we have, you know, right now --
- 9 GARTH ANDERSON: Let me untangle this cord
- 10 for you.
- 11 SCOTT MARQUESS: All right. High, high
- 12 concentration, less concentration, less
- 13 concentration, less concentration, 5. I'm sorry.
- So contaminants moving this way, we should
- 15 expect to see the wells to the south increase in
- 16 concentration.
- 17 I'll just expand a little bit.
- 18 Garth mentioned some sampling that the Corps has
- 19 done, Geoprobe sampling across this plume, very,
- 20 very good data.
- It's shown over there the results, and if
- 22 you look at it in detail, they did some sampling
- 23 last fall, I think, I don't know, they just
- 24 completed -- I guess there's a little more to do --
- 25 GARTH ANDERSON: We're still out in the

- 1 field doing the Phase 2.
- 2 SCOTT MARQUESS: If you look at the data,
- 3 what you'll start to see is this is a five line for
- 4 TCE, this is a five line for TCE. What you have in
- 5 between there is a much more highly contaminated and
- 6 highly concentrated smaller strip of contamination
- 7 that kind of starts up this way and kind of runs
- 8 around on the western side and is pretty narrow,
- 9 maybe a few hundred -- 500 feet or more, runs down
- 10 through here and starts coming up right through
- 11 here.
- 12 And low and behold, if you look at
- 13 Johnson Creek, SW-08 right here, which I think is
- 14 the highest surface water detection for TCE that we
- 15 have, I think maybe in the 50s up to 60, that's
- 16 where this plume hits. And so what you do about it,
- 17 that's what the focused extraction component in the
- 18 ROD is supposed to address.
- 19 So if what we have out here is somewhere
- 20 between 5 and 20 parts per billion of TCE along this
- 21 edge, what we have in this narrow band is up to a
- 22 thousand or 1500 parts per billion of TCE, this is
- 23 the part we want to fix, and when we fix that, then
- 24 what you'll see is that stuff that's discharging
- 25 from groundwater to surface water is going to

- 1 dissipate.
- 2 And we're going to be in a position to
- 3 show all that to you when this data becomes
- 4 available in the next months -- few months, and part
- 5 of the site management plan is to take that next
- 6 step and go in and address this hot area.
- 7 So don't look at this as -- this is not
- 8 all the same, this is not a homogenous . There's a
- 9 small area through here that's concentrated, and we
- 10 can manage that; that's the part that you can
- 11 address.
- 12 If you have a large dilute plume it's
- 13 really hard to get your hands on it and remediate
- 14 it. You can contain it, but to make it all go away,
- 15 it's large and dilute, it's very, very difficult.
- What we're finding, and I expect what
- 17 we'll find as we go across the site from east to
- 18 west, we're going to find highly contaminated zones
- 19 that you're going to focus on, and that's what the
- 20 ROD intends for us to do to clean the site up and
- 21 remove as much mass as possible as quickly as
- 22 possible.
- 23 DAVE MCREYNOLDS: Dave McReynolds, I live
- 24 pretty close in that area, and as you guys well
- 25 know, and you can probably give us the data, 54 has

1 been high for a long time; are you trying to tell us

- 2 that 54 has gone down and it's pushed on farther
- 3 south, because this has gone up, you know, and it is
- 4 south and east of that?
- 5 There's no houses real close or any wells
- 6 straight east of it, of 54, which has been high for
- 7 a long time.
- 8 GARTH ANDERSON: What do we have for
- 9 54 currently, can somebody look that up, please?
- 10 DAVE MCREYNOLDS: They also have TC and
- 11 RDX both.
- 12 MARY LYLE: If I can address that, and
- 13 this is actually probably, I'm suspecting, part of
- 14 Melissa's question too, these residential wells are
- 15 located within the plume, if they're the ones that
- 16 you're talking about, and they do receive carbon
- 17 treatment.
- 18 And so every time these -- in the homes we
- 19 have two carbon units, and so that when the water
- 20 comes in, it goes through the first one and then it
- 21 goes through the second one, and then the people are
- 22 able to use the water.
- We always sample in between the two carbon
- 24 units so that we can monitor breakthrough. If we
- 25 start to see detections that make us know that we

1 need to change that first carbon filter treatment,

- 2 then that's what that data tells us.
- 3 There's still -- even if we see
- 4 detections, they're still protected by the second
- 5 carbon unit, but we always monitor in between, and
- 6 sometimes we monitor the water before it goes into
- 7 even the first one, which I suspect is the data that
- 8 Melissa was referring to earlier.
- 9 So those higher concentrations we know are
- 10 coming in already to the carbon unit, but those
- 11 people are not at risk because they're protected by
- 12 the treatment system.
- 13 MELISSA KONECKY: That's quarterly that
- 14 the people's water supplies are being tested?
- 15 MARY LYLE: With the carbon treatment,
- 16 we -- I think do we sample those semiannually or is
- 17 it --
- 18 BRADY BIGELOW: It recently changed, but
- 19 before it depends on -- I can look that up to
- 20 verify. I don't know off the top of my head.
- I believe those are at least semiannual,
- 22 but let me look that up real quick and I can let you
- 23 know.
- 24 MELISSA KONECKY: Thank you.
- 25 LINDA WAGEMAN: Back to Dendinger's

- 1 irrigation well; there were readings of TCE at 13.
- 2 The question regarding the irrigation well is this:
- 3 Is it currently being used as an irrigation well,
- 4 does anybody know?
- 5 MARY LYLE: Yes, it is.
- 6 LINDA WAGEMAN: Okay. TCE has a half-life
- 7 of 14 days. Is it 14 days or 7, Scott? I can't
- 8 remember, I want to say -- okay. It's seven days.
- 9 So if we take this well that's currently
- 10 sitting at 13 on TCE and we say, okay, it's going to
- 11 have a half-life, let's drop it down to 6.5, that's
- 12 still above action level, and we're going to shoot
- 13 it out in the air when this man irrigates his field;
- 14 that really pisses me off.
- Okay. So when Mary turns around and says,
- oh, it's just an irrigation well, it's a good thing
- 17 I'm behind this table, okay, because you don't shoot
- 18 13 out in my area and say, oh, it's just, okay, we
- 19 got kids out here.
- Now, I want to know since the Corps knows
- 21 that this is an active irrigation well and the Corps
- 22 and the EPA know that it is being registered at 13,
- 23 I want to know how the EPA, the Environmental
- 24 Protection Agency, is going to do precisely that,
- 25 protect my environment.

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What are you going to do with this
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- 2 irrigation well; are you going to halt it, minimize
- 3 it, slap a carbon filter on it, what?
- 4 SCOTT MARQUESS: We have other sites in
- 5 Nebraska where we use irrigation wells as a
- 6 remediation tool to strip the volatiles from the
- 7 groundwater as it's sprayed up, and we checked on
- 8 this a while back.
- 9 This is something we came up and talked
- 10 about with somebody here maybe several months, a
- 11 year ago, and the -- at the other site -- do you
- 12 know, Alyse, what site is it?
- 13 ALYSE STOY: Hastings.
- 14 SCOTT MARQUESS: Hastings. I think it's
- 15 Dr. Spaulding from the University of Nebraska came
- 16 up with an irrigation nozzle and helped -- to help
- 17 strip the volatiles out of the groundwater.
- In terms of what risks are associated with
- 19 that at that site, the levels that they were
- 20 spraying out through the irrigation system, I
- 21 believe -- don't quote me, I believe the values were
- 22 about 500 to 600 parts per billion TCE, and that was
- 23 deemed not to pose a significant risk to -- and I
- 24 can't -- I can't regurgitate what the exposure
- 25 setting was at that site relative to this site.

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1 I can certainly look into that and get you
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- 2 that information, tell you what that -- how that
- 3 translates to here, but at first blush, you know, at
- 4 13 in an irrigation well, I wouldn't anticipate that
- 5 if we're allowed in other sites and we found out
- 6 it's protecting at 500 to 600 parts per billion, I
- 7 wouldn't anticipate that 13 would pose a problem.
- 8 LINDA WAGEMAN: How much does this nozzle
- 9 cost?
- 10 SCOTT MARQUESS: I couldn't tell you.
- 11 LINDA WAGEMAN: Why don't we find out?
- 12 SCOTT MARQUESS: And I don't believe it's
- 13 necessarily specific to a nozzle. I think it's more
- 14 so a function of the volatilization and the
- 15 atmospheric travel for the water more so than a
- 16 specific --
- 17 LINDA WAGEMAN: If I have a puddle of
- 18 water and I put my foot in this puddle of water and
- 19 it is sitting at, you know, 6.5 TCE, you're going to
- 20 turn around and tell me that's not a bad thing?
- 21 Have you ever walked a field after it's been
- 22 irrigated?
- 23 SCOTT MARQUESS: Well, I don't know
- 24 whether there's a 6.5 puddle --
- 25 LINDA WAGEMAN: Well, if TCE shoots up in

- 1 the air and it has a half-life, taking its level
- 2 from 13 down 6.5 and it's going to be floating out
- 3 in the -- in the environment and in the atmosphere
- 4 for seven days, that's just according to the EPA's
- 5 web site, I'm just spewing off what you guys have
- 6 been telling me --
- 7 SCOTT MARQUESS: I don't think that's the
- 8 way to interpret what that half-life means.
- 9 LINDA WAGEMAN: Okay. How would I
- 10 interpret that then?
- 11 SCOTT MARQUESS: Well, there's other
- 12 processes -- that's a natural decay phenomena, okay.
- 13 LINDA WAGEMAN: Once it hits the sun
- 14 light?
- 15 SCOTT MARQUESS: Yeah, but that's not --
- 16 that doesn't account for the TCE that's volatilized
- 17 as it's coming out of the nozzle, so that's going in
- 18 the air, what -- that's the seven days, okay.
- 19 LINDA WAGEMAN: Uh-huh.
- 20 SCOTT MARQUESS: So now I have TCE in the
- 21 air, I don't have it in the water, so what's hitting
- 22 the ground isn't -- that's not a function of the
- 23 half-life. It's a function of the number of
- 24 chemical properties of TCE in water.
- 25 LINDA WAGEMAN: You know, we've discussed

1 this issue, we discussed this issue about a year and

- 2 a half ago, so I guess basically what you're telling
- 3 me is we do have an irrigation well in a dangerous
- 4 location that's still being used to irrigate fields
- 5 that are going to be cultivated and processed for
- 6 food to give to other people, and we shouldn't be
- 7 remotely concerned about it?
- 8 So if you're telling me to sit down, kick
- 9 me feet up, watch TV and go to bed or whatever, then
- 10 come right out and say that, but I'm sorry, Scott, I
- 11 don't buy it.
- 12 SCOTT MARQUESS: I'll be happy to go back
- 13 and look at -- I mean, this is not the first time
- 14 this has been an issue.
- 15 LINDA WAGEMAN: We've been around on this.
- 16 SCOTT MARQUESS: So I mean, I'd be happy
- 17 to show you what information we have and talk about
- 18 it with you, go over it; I don't believe that
- 19 there's a significant risk posed by that condition
- 20 that you just outlined.
- 21 LINDA WAGEMAN: Significant risk or risk,
- 22 and your belief versus my belief? I guess, you
- 23 know, let's check and see how much protecting that
- 24 irrigation well would cost and if it behooves us to
- 25 slap it in the budget, slap in it budget.

- 2 know, if it's under 2500 bucks let me know what it
- 3 is and I'll write a damn check. It's that
- 4 important, and you guys need to understand that.
- 5 SCOTT MARQUESS: Well, we understand and
- 6 that's --
- 7 LINDA WAGEMAN: Then let's act on it then.
- 8 Let's find out exactly what it's going to cost to
- 9 take care of this irrigation well, and then you can
- 10 show me all your data later, deal?
- 11 SCOTT MARQUESS: Just to reiterate, we
- 12 act -- our program is a risk-based program, okay.
- 13 We -- EPA has authority to compel responsible
- 14 parties to abate risks associated with hazardous
- 15 substances that exceed the ten to minus four to ten
- 16 to minus six carcinogenic risk.
- 17 If we don't exceed that kind of a risk we
- 18 don't have the authority to compel parties to take a
- 19 response action, okay.
- 20 LINDA WAGEMAN: Maybe --
- 21 SCOTT MARQUESS: Let me --
- 22 LINDA WAGEMAN: But maybe a resident who's
- 23 willing to foot the bill does, and maybe if we ask,
- 24 they'd be willing to do something.
- 25 So in other words, until it becomes

1 detrimental to one's health, the federal authorities

- 2 can't help. Well, I'm not willing to wait that
- 3 long. I told you, I'm not willing to wait that
- 4 long.
- 5 So I'm not remotely interested, as we've
- 6 discussed in the past, what a group of think-tankers
- 7 decided in Washington one day over a bucket of
- 8 chicken, I don't care, okay.
- 9 I know what the EPA is doing in various
- 10 parts of the country, and they do a very good job.
- 11 I also know what the EPA does in other parts of the
- 12 country and they don't do a very good job, and we
- 13 can banter back and forth. I don't care about
- 14 Kearney, I could care less about Kearney. All I
- 15 care about is this plume and the people around it.
- 16 SCOTT MARQUESS: Let me try and give an
- 17 example to address your concern about the potential
- 18 for regulating things below regulatory levels, okay.
- We used to have a speed limit in the
- 20 country of 55 miles an hour, so we found that there
- 21 were less accidents at 55, yet we raised the speed
- 22 limit back to 70, okay, so what if the highway
- 23 patrolman came up to you on your drive home tonight
- 24 and said you're going 62 miles an hour, that's more
- 25 risky than going 55, it's less than 70, you're

1 allowed to go 70, but me a highway patrolman, I'm

- 2 going to issue a ticket; do think that would be
- 3 equitable?
- 4 LINDA WAGEMAN: I think that as an arm of
- 5 the law, quite frankly speaking, knowing that the
- 6 speed limit -- speed limit is 70, if, for one reason
- 7 or another, he would pull me over and give me a
- 8 ticket for doing 62, I would have to take on belief
- 9 to the extent to which I believe that that officer
- 10 was protecting my life and my property, I would have
- 11 to believe that he is looking out for my best
- 12 interest.
- So if he's going to turn around and give
- 14 me a ticket for going 62 miles an hour in a 70-mile
- 15 per hour limit zone I would, in fact -- I would, in
- 16 fact, accept it.
- Once again we're not looking at limits,
- 18 we're looking at what is best regarding the
- 19 situation.
- 20 SCOTT MARQUESS: Well, I think it's kind
- of analogous, okay, I don't think you're going to
- 22 have find too many police officers who are going to
- 23 stop you and issue you a ticket when you're going
- 24 62 if the speed limit is 70, so --
- 25 LINDA WAGEMAN: I can't answer to that,

- 1 I'm not a cop, but I bet you -- I bet you if they
- 2 had -- you know, maybe if they did maybe we wouldn't
- 3 have so many traffic incidents.
- 4 And it's Not 70, everywhere it's 55 and
- 5 65, it's 45 based on the level of danger.
- 6 DAVE MCREYNOLDS: You're not talking
- 7 about -- it's over the level. It's not 62, it's
- 8 above the level, so you're not even talking about
- 9 the same thing. It's above the level, it's clear up
- 10 to 13.
- 11 SCOTT MARQUESS: In the Artesian Well,
- 12 right, so the level --
- DAVE MCREYNOLDS: Yeah, and that's a new
- 14 area, and it's going to keep moving until you get it
- 15 under control.
- 16 SCOTT MARQUESS: Absolutely, which is
- 17 absolutely why you have to --
- DAVE MCREYNOLDS: He ought to be able to
- 19 answer what 54 is now if 54 is gone in any -- down
- 20 any.
- I mean, you haven't answered any of our
- 22 questions. We've asked different locations, what
- they were, and you haven't answered any of those.
- 24 SCOTT MARQUESS: I'll be happy to track --
- 25 Brady, 54.

- 1 BRADY BIGELOW: Yeah.
- 2 GARTH ANDERSON: We're running the data
- 3 checks as quick as we can. We've got the ski lake
- 4 data to Chris Funk.
- 5 MARY LYLE: To get back to Melissa's
- 6 question about the carbon unit sampling, in 2005 we
- 7 sampled the before, which is probably that higher
- 8 data that you saw two times, and then in between
- 9 quarterly, the in between sample quarterly to
- 10 monitor for breakthrough.
- 11 MELISSA KONECKY: Oh.
- 12 GARTH ANDERSON: Lorus.
- 13 LORUS LUETKENHAUS: Got a copy from the
- 14 Kansas City Corps here, May 4th of '05, it says you
- 15 say you will acknowledge and respond to every
- 16 concern raised at each RAB meeting; it's your -- it
- 17 belongs to you, sir.
- 18 GARTH ANDERSON: Keep going.
- 19 LORUS LUETKENHAUS: On this plume up here,
- 20 we've got U, we've got J, we've got UJ, we've got
- 21 under action levels; none of that is shown up here.
- Now, to respond to my question, would you
- 23 do that for the future meetings anytime there's a
- 24 detection? I don't care how you do it, if you want
- 25 to draw it on this map or put an overlay on it, can

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1 outline it, and then the next three months we'll be
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- 2 able to see where it's going, because right now this
- 3 is all above action level; is that correct?
- 4 GARTH ANDERSON: That's correct.
- 5 LORUS LUETKENHAUS: All right. So the
- 6 public doesn't have any idea where in the hell this
- 7 stuff is out there, follow me?
- 8 GARTH ANDERSON: I understand.
- 9 LORUS LUETKENHAUS: You've got fingertips
- 10 that are going out with stuff that are below action
- 11 levels; would you please depict that on a map for us
- 12 in the future?
- 13 GARTH ANDERSON: Yeah, I think at worst
- 14 case you're going -- if you reported out to a
- 15 nondetect you wouldn't see a whole lot of change in
- 16 this -- in the shape of this map.
- 17 LORUS LUETKENHAUS: My question was: Is
- 18 would you do that for us, sir?
- 19 GARTH ANDERSON: I -- we can attempt to do
- 20 a meaningful depiction. I don't know if it'll be
- 21 meaningful, but I don't -- what we're trying to
- 22 depict here is how we're containing the plume and
- 23 where it is, if it's above the regulatory limit.
- 24 LORUS LUETKENHAUS: Your own document, you
- 25 will respond, is what you said; it's in black and

- 1 white, would you like to read it?
- 2 GARTH ANDERSON: I know what it says.
- 3 LORUS LUETKENHAUS: All right, sir, then I
- 4 would appreciate it if future meetings you will
- 5 depict that on a map somehow so we can -- it doesn't
- 6 have to be that one, I don't care, but each meeting
- 7 so that we can see where this sucker is going.
- 8 And it's going to become very important
- 9 when MUD starts pumping their water, I'll guarantee
- 10 you, because it might be under action level, I want
- 11 to know where it's going. Thank you.
- 12 GARTH ANDERSON: We're pretty confident we
- 13 know where it's going, right into our extraction
- 14 wells.
- 15 All right. Any other questions? Looks
- 16 like we're almost getting toward the end of the
- 17 evening here.
- 18 Again, any specific questions about data
- 19 if you have a question about your well or any -- or
- other points, we will stay here and talk about that;
- 21 if you'd like to go back to the map and talk about
- 22 data we'd be more than happy to do that.
- MARY LYLE: Mr. McReynolds, were you
- 24 asking, I'm sorry, about Water Supply Well 54?
- DAVE MCREYNOLDS: No, Residential Well 54.

1 MARY LYLE: Residential Well 54, when we

- 2 sampled that --
- 3 DAVE MCREYNOLDS: What is the level?
- 4 MARY LYLE: TCE and RDX, when we sampled
- 5 that, those were both below 1 part per billion in
- 6 2005.
- 7 GARTH ANDERSON: Okay. Mary, I guess we
- 8 can move on to the March -- the 2006 GMP.
- 9 MARY LYLE: And I put this slide together
- 10 just to identify what we plan to do in March. We
- 11 finished up this past monday, that data will be out
- 12 before the next RAB meeting in July.
- The maps in the back on the back wall show
- 14 our plan for 2006 during each quarter for monitoring
- 15 wells, water supply wells, and at the very end we're
- 16 going to be sampling the surface water locations on
- 17 this map on a quarterly basis.
- 18 I think this -- just -- this provides a
- 19 total of everything that we're going to be sampling
- 20 in 2006 over 70 -- I'm sorry, 71 residential water
- 21 supply wells, and based on their frequency, those
- 22 will be sampled various -- various times during the
- 23 year.
- 24 Some of them are quarterly if they're
- 25 within the plume, and they have typically quarterly.

1 We also will continue with the one-mile buffer

- 2 sampling on an annual basis; that will be next
- 3 September.
- 4 Over a total of 109 monitoring wells are
- 5 planned for 2006, and then quarterly sampling at
- 6 13 surface water locations.
- 7 GARTH ANDERSON: All right. Great,
- 8 thanks. Oh, question in the back.
- 9 LYNN MOORER: I recall seeing a document
- 10 that mentioned a half-mile line, and I remember it
- 11 having something to do with the context of EPA; is
- 12 that an EPA-lead issue? Who can address that?
- GARTH ANDERSON: I can address that.
- 14 LYNN MOORER: What's that talking about
- 15 and what's anticipated and what's the time line?
- GARTH ANDERSON: What we're talking about
- 17 is getting a little more structure to the sampling
- 18 within the one-mile buffer zone.
- The one-mile buffer zone sampling will
- 20 continue, and what we -- a concept we came up with
- 21 is we drew another line that's in between the
- 22 one-mile and the plume, we just call it a half-mile
- 23 line--Lisa is pointing to it--and residential wells
- 24 that are inside the half-mile line, we're going to
- 25 be sampling semiannually, and those on the other

- 1 side of the half-mile line will be annual.
- 2 Previous -- that's actually an increase in
- 3 the amount of sampling that we've been doing in the
- 4 one-mile buffer zone.
- We thought those that were closer to the
- 6 plume warranted more frequent sampling, and the rest
- 7 would continue on the same frequency as we had done
- 8 over the past two years.
- 9 LYNN MOORER: Is this a result of the
- 10 dispute resolution process when the Corps was
- 11 dragging its feet, or shall we say coming up with
- 12 excuses why they didn't want to sample as frequently
- as EPA and DEQ wanted them to sample?
- 14 GARTH ANDERSON: Let me tell you what we
- 15 did do for the 2006 sampling plan.
- 16 LYNN MOORER: That's a yes or no question,
- 17 Mr. Anderson.
- 18 GARTH ANDERSON: I'm not going to answer a
- 19 yes or no question, it's a loaded question so
- 20 I'll -- let me tell you what I am -- what we are
- 21 talking about for 2006, because we did have some
- 22 disagreements over 2005 sampling.
- 23 We doubled our efforts to get the sampling
- 24 plans done early, in agreement early, and we sat
- 25 down at the table several times in late 2005 and

1 early 2006 to -- to make sure we all agreed on what

- 2 the sampling frequency would be, and we -- we worked
- 3 cooperatively, and we reached what we think is a
- 4 very good plan on 2006.
- 5 So at this point we are -- right now we
- 6 are in complete agreement to what the 2006 sampling
- 7 plan will be. Will there -- could there be changes,
- 8 you bet.
- 9 If we see some data point that needs to be
- 10 addressed or some -- something that is unusual, then
- 11 we may modify the plan as we go along, or if other
- 12 circumstances arise that warrant some additional
- 13 sampling.
- So the process worked, we got to agreement
- 15 early before we even went out and did -- took our
- 16 first sample in March.
- 17 LYNN MOORER: May I ask another follow-up
- 18 question on something?
- 19 GARTH ANDERSON: Certainly.
- 20 LYNN MOORER: Early in the meeting on your
- 21 little fact sheet here it says Item 2, the status
- 22 report on EW-12 and EW-13, you -- it says, EW-12 is
- 23 extracting more water than was originally expected.
- 24 So I have two questions: What was
- 25 projected, what did you expect, and then what is the

- 1 actual?
- 2 GARTH ANDERSON: Okay. Brady, do you
- 3 want to address that because you have a good handle
- 4 on the specifics on 12 and 13.
- 5 BRADY BIGELOW: I'd have to look up in
- 6 the table exactly what it is. The -- the rates
- 7 actually change according to the model over time,
- 8 meaning that EW-12 pumps a little higher at first
- 9 and then would slowly drop down in concentration --
- 10 correct me if I'm wrong on any of this, Lisa.
- 11 The -- the long-term pumping rates are, I
- 12 believe, in 225, 210, something in that area. When
- 13 we put this well in we were able to take it up much
- 14 higher, get much more production out of it, and even
- 15 still it's in a position where we can increase it a
- 16 little bit more if we needed to, but right now we're
- 17 collecting data.
- 18 Actually we've been -- at first we
- 19 collected data -- we're collecting monthly right now
- 20 in all the monitoring wells that you see down in the
- 21 area, the Load Line 1 monitoring wells, and once all
- 22 that data is collected -- actually we're feeding
- 23 that as we get it to URS, and URS is running the
- 24 model, and that'll give us a better idea of the
- 25 capture in that area.

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1 But because of where it is, it looks like
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- 2 it's in a very good spot to capture, and we're able
- 3 to get a lot more water in.
- 4 LYNN MOORER: Will you get those specific
- 5 numbers for me that I asked for?
- 6 BRADY BIGELOW: Which ones? I got a lot
- 7 over there.
- 8 LYNN MOORER: What was projected and what
- 9 was the actual --
- 10 BRADY BIGELOW: Sure.
- 11 LYNN MOORER: -- for EW-12? Thank you.
- 12 GARTH ANDERSON: Yes, sir.
- 13 DAVE MCREYNOLDS: There's several of us
- 14 that'd like to know Monitoring Well 85 --
- 15 GARTH ANDERSON: Yes.
- DAVE MCREYNOLDS: -- because at 2/26/05,
- 17 it was five times the limit.
- 18 GARTH ANDERSON: Yes.
- 19 DAVE MCREYNOLDS: And so we'd like
- 20 an update on that if possible.
- 21 GARTH ANDERSON: Okay.
- DAVE MCREYNOLDS: All three levels as they
- 23 do do -- they do those monitoring wells on three
- 24 different levels.
- 25 GARTH ANDERSON: Right. What we did, we

- 1 did have a hit in MW-85 that was above the action
- 2 level, and what that did was it triggered additional
- 3 sampling on our part so that we could understand why
- 4 it was high.
- 5 In a case like this, if we have something
- 6 that seems unusual, like, for instance MW-85, first
- 7 thing we do is we go out and resample the well. We
- 8 want to make sure that that is, in fact, a true
- 9 piece of data, because sometimes other things happen
- 10 like a lab may screw up, something is transcribed
- 11 wrong. There are a number of things. So we go out
- 12 and sample it several many more times to make sure
- 13 that is a true result.
- In addition, we -- we -- we went out with
- 15 some direct push sampling, that's where we put a
- 16 geoprobe down in the ground and collect samples at
- 17 various depths to ensure that there's nothing up
- 18 gradient or beside it or around it that would have
- 19 caused that kind of spike.
- 20 And after doing that investigation just
- 21 last year we found that that MW-85 was not a -- not
- 22 a -- was really nothing to indicate there was
- 23 something unusual going on that we had broken
- 24 containment. We haven't seen any levels like that
- 25 since in any of our sampling.

1 DAVE MCREYNOLDS: Is it there in two

- 2 levels?
- 3 GARTH ANDERSON: I'm going to have to have
- 4 Brady Bigelow run that number too.
- 5 DAVE MCREYNOLDS: All right. Because --
- GARTH ANDERSON: Yes, Scott.
- 7 SCOTT MARQUESS: The ten was only in one
- 8 level, the 85B.
- 9 DAVE MCREYNOLDS: The second time I heard
- 10 it was two levels, that it was two different levels.
- 11 It was low, but it was in two different levels.
- 12 SCOTT MARQUESS: I can specifically
- 13 address that. The ten was in 85B, one well.
- DAVE MCREYNOLDS: Yeah, right, when it was
- 15 really high.
- 16 SCOTT MARQUESS: There were detections at
- 17 1 to 1.4, and other wells -- and you can see the
- 18 data here, you know, if you'd like to look at it
- 19 later, that well at that location, and then all the
- 20 sampling that was around that, so --
- 21 DAVE MCREYNOLDS: But, you know, just
- three-fourths a mile north they've had it in that well,
- 23 residential well for a long time, and it's been high
- 24 right up the road.
- 25 GARTH ANDERSON: Which --

- 1 DAVE MCREYNOLDS: 52A.
- 2 GARTH ANDERSON: Yeah, 52A is actually in
- 3 the plume, and you would expect to see contamination
- 4 there.
- DAVE MCREYNOLDS: Yeah, but this is south
- 6 of there.
- 7 GARTH ANDERSON: Right, yeah, but if you
- 8 look at, you have almost a direct line. Between
- 9 52 and 85 you have Extraction Well 3, and you can
- 10 almost draw a straight line between the three.
- 11 DAVE MCREYNOLDS: So you're telling us
- 12 that Extraction 3 is going to take care of that
- 13 problem, that it's not going to get any higher down
- 14 there at 85?
- 15 GARTH ANDERSON: Yes.
- DAVE MCREYNOLDS: That's what I wanted to
- 17 know.
- 18 GARTH ANDERSON: I think --
- 19 LYNN MOORER: Just a quick clarification,
- 20 we do appreciate having the court reporter, we do
- 21 appreciate the professional videographer, as I
- 22 explained to Mr. Bigelow, when he attempted to
- 23 answer to his question -- my question privately, the
- 24 answer needs to be given out loud, it needs to go on
- 25 the record, and that -- as you know, there are -- a

1 lot of people aren't able to attend these meetings.

- 2 That's one of the reasons why the
- 3 transcript's valuable, so I just respectfully urge
- 4 you all to resist your habit of saying, look, you
- 5 can come talk to me about it later or I'll give you
- 6 the answer here privately.
- 7 No, we all want to know it, and the other
- 8 thing is it needs to all be on the record, so I ask
- 9 Mr. Bigelow to give the answer out loud when he has
- 10 it for everyone.
- 11 GARTH ANDERSON: Brady, you got it for
- 12 us?
- 13 LYNN MOORER: Mr. Anderson, I ask that all
- 14 the questions be answered out loud to everyone like
- 15 that.
- 16 GARTH ANDERSON: Sure.
- 17 LYNN MOORER: Thank you.
- 18 SCOTT MARQUESS: I'll just -- I want to
- 19 make sure that everyone here knows that EPA is
- 20 perfectly willing and able to discuss with any one
- 21 of you one on one any questions that you have or
- 22 anything that you'd like to have answered
- 23 individually.
- It doesn't all have to be as a group, and
- 25 we're perfectly willing to talk with you one on one,

- 1 and it doesn't have to be in a group setting.
- 2 GARTH ANDERSON: And, of course, the Army
- 3 extends the same offer, that's why we have the open
- 4 houses before the RAB meeting.
- 5 If your schedule doesn't accommodate
- 6 coming to the meeting, and -- or if you have a
- 7 complex question that you may want us to help you
- 8 answer, so we can go up the map and spend a little
- 9 time discussing it and maybe running the data on our
- 10 computer.
- 11 Brady, do you have --
- BRADY BIGELOW: Yeah, I've got --
- GARTH ANDERSON: First, can you restate
- 14 the question so that we all --
- 15 BRADY BIGELOW: The question was what --
- 16 oh, I hope I get this right. The -- what is the
- 17 projected pumping rates of EW-12 and how does that
- 18 relate to what we're pumping at right now.
- 19 The -- as I tried to explain before, the
- 20 way that the design is set up is EW-12 starts the
- 21 pump first and then over the years EW-13 increases
- 22 in volume while EW-12 drops, and that -- I'm not a
- 23 groundwater person so you'll have to bear with me a
- 24 little bit, but that sort of steers the plume over a
- 25 little bit; that's the intent.

1 Right now we're pumping at 325 during the

- 2 start-up, we're pumping right at the design rate,
- 3 and then for the first Year 3 and 4, which is last
- 4 year and this year, we stay at 325, and then we drop
- 5 to 225 to 2 -- during the 4 through 8 years, the
- 6 8th through 14th year is 200, and the 14th year and
- 7 beyond, which is 2018 and beyond, is 175, so --
- 8 LYNN MOORER: We just started pumping that
- 9 well, didn't we? It's not been in service that
- 10 long, right?
- BRADY BIGELOW: That's right.
- 12 LYNN MOORER: Okay. So if you could just
- 13 give the two answers: What -- because you said
- 14 right here, EW-12 is extracting more water than it
- 15 was originally expected.
- BRADY BIGELOW: It can, yes.
- 17 LYNN MOORER: Well, all I'm asking for is
- 18 what did you project and what's the actual?
- 19 BRADY BIGELOW: Right now we're right at
- 20 the design rate.
- 21 DAVE MCREYNOLDS: How much is that?
- 22 LYNN MOORER: Okay. And how much did you
- 23 project?
- 24 BRADY BIGELOW: Three twenty-five.
- 25 LYNN MOORER: How much did you project?

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1 BRADY BIGELOW: Well, we didn't really
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- 2 project anything. Until you put a well in you don't
- 3 actually know what it'll produce, is that what
- 4 you're asking?
- 5 LYNN MOORER: Well, I'm just simply trying
- 6 to get the difference.
- 7 BRADY BIGELOW: Design rate --
- 8 LYNN MOORER: What you're saying right
- 9 here, you're pumping more than was originally
- 10 expected, so how much did you originally expect?
- 11 BRADY BIGELOW: Design rate for the
- 12 325 for the first few years.
- 13 LYNN MOORER: So at least it appears that
- 14 the statement isn't actually true.
- BRADY BIGELOW: There is primary --
- 16 LYNN MOORER: You're pumping at the level
- 17 that you expected to pump at; is that the more
- 18 correct statement?
- 19 BRADY BIGELOW: Yeah, there's a primary
- 20 operating condition and a secondary operating
- 21 condition, and it's -- you got to look at the
- 22 design, you know, because you want to -- you want to
- 23 size the pump and motor so it runs most efficiently
- 24 or uses a lot of electricity and a lot of other
- 25 issues, but you --

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1 But the long term -- I guess I'm not
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- 2 quite -- yes, we're running right at the design.
- 3 During the start-up phases we pegged it right at the
- 4 design rate. Can it produce more water, yes.
- 5 GARTH ANDERSON: This is a good thing.
- 6 BRADY BIGELOW: Yeah.
- 7 GARTH ANDERSON: I'd like to answer
- 8 another question the Dave McReynolds asked about
- 9 Monitoring Well 85. Since November of 2004 -- well,
- 10 actually since March of 2005 I should say because
- 11 November is when we had the high hit.
- DAVE MCREYNOLDS: No, it was 2/26/05 --
- 13 okay, it was November, but --
- 14 GARTH ANDERSON: Right, it was November
- 15 of --
- DAVE MCREYNOLDS: (Inaudible comment)
- 17 2/26/05.
- 18 GARTH ANDERSON: Right, but since then the
- 19 levels in March, June, and November of '05 have all
- 20 been consistently between 1 and 1.4.
- 21 DAVE MCREYNOLDS: Now, okay, is that at
- 22 one level?
- 23 GARTH ANDERSON: That's for two levels, A
- 24 and B.
- DAVE MCREYNOLDS: A and B are both -- have

- 1 both been running 1.4?
- 2 GARTH ANDERSON: Yes.
- 3 DAVE MCREYNOLDS: Never higher than that?
- 4 GARTH ANDERSON: 1.4 is the highest level
- 5 we've seen.
- 6 DAVE MCREYNOLDS: That's five times the
- 7 limit.
- 8 GARTH ANDERSON: Actually the -- for RDX
- 9 the limit is two, so we're running about -- we're
- 10 running under that. Here's the -- here it is right
- 11 now.
- DAVE MCREYNOLDS: Thank you.
- 13 LINDA WAGEMAN: Garth, this is Linda.
- 14 GARTH ANDERSON: Yes.
- 15 LINDA WAGEMAN: Getting back to what you
- 16 were talking about before and the mid-mile buffer
- 17 testing --
- 18 GARTH ANDERSON: Right, the half-mile
- 19 line, yes.
- 20 LINDA WAGEMAN: Yeah, could you show me on
- 21 the map just kind of where you're going to be
- 22 incorporating that testing?
- 23 GARTH ANDERSON: Yeah, actually the back
- 24 map shows it much better, but I'll try to do it up
- 25 here. We have an exact line on those back maps, but

1 if -- here's the one mile, here's the edge of the

- 2 plume.
- 3 LINDA WAGEMAN: Right.
- 4 GARTH ANDERSON: The one-mile line.
- 5 LINDA WAGEMAN: Right.
- 6 GARTH ANDERSON: So just basically halfway
- 7 between the two.
- 8 LINDA WAGEMAN: So are you going to go
- 9 above the NRD reservoir or are you going to start
- 10 below the NRD reservoir?
- 11 GARTH ANDERSON: Well, the NRD reservoir
- 12 is within a half mile of the edge of the plume.
- 13 LINDA WAGEMAN: Well, I'm trying to figure
- 14 out exactly how far north you intend to go in the
- 15 test.
- 16 GARTH ANDERSON: (Indicating.)
- 17 LINDA WAGEMAN: Oh, you're going to go all
- 18 the way to the tippy-top.
- 19 GARTH ANDERSON: Yeah, we have wells -- we
- 20 have wells within that, at like 80 and 82.
- 21 LINDA WAGEMAN: Then you're going to take
- 22 it all the way south? I'm following your finger.
- GARTH ANDERSON: Yes.
- 24 LINDA WAGEMAN: Oh, okay, excellent, thank
- 25 you.

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1 GARTH ANDERSON: You're welcome.
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- Okay. Great questions, we appreciate it,
- 3 we like talking about the data. Again, just want to
- 4 offer, anybody wants to stick around, we got maps,
- 5 we're ready to talk even further.
- 6 Yes, another question, Lorus.
- 7 LORUS LUETKENHAUS: This is not a
- 8 question.
- 9 GARTH ANDERSON: Okay.
- 10 LORUS LUETKENHAUS: I'm going to stand up,
- 11 I was wrong. We were talking about perchlorate at
- 12 the last meeting, I said it was in all four load
- 13 lines; that is not true. I don't think, we don't
- 14 for sure because it has never been tested; is that
- 15 correct?
- 16 GARTH ANDERSON: There has -- EPA did some
- 17 testing I think around 2003, but EPA has since --
- 18 they've gone out in the course of our sampling and
- 19 personnel from EPA had gone out and taken what we
- 20 call split samples to run at their own laboratory
- 21 for perchlorates.
- 22 LORUS LUETKENHAUS: Okay. Well, I just
- 23 want everybody to know I didn't intentionally try to
- 24 mislead you. It was PCBs that was found in all four
- 25 load lines, and I did remember reading that out of a

- 1 document.
- 2 GARTH ANDERSON: Okay. Well, thank you.
- 3 LORUS LUETKENHAUS: We do need to pay
- 4 attention to the percolate.
- 5 SCOTT MARQUESS: Let me just follow-up.
- 6 GARTH ANDERSON: Just one thing about
- 7 PCBs. PCBs are generally associated with electrical
- 8 transformers, it's a nonflammable oil that would go
- 9 in a transformer.
- 10 SCOTT MARQUESS: On the split sampling
- 11 Garth referenced, we took -- EPA collected samples
- 12 from several monitoring well clusters, and I'll give
- 13 you the numbers, let's see 21 -- these are
- 14 monitoring wells, 21A, B, D; 24A and B.
- 15 GARTH ANDERSON: There's 21.
- 16 SCOTT MARQUESS: 24. They're kind of a
- 17 random order here.
- 18 GARTH ANDERSON: Had to do with when we
- 19 installed them not, necessarily any kind of logical
- 20 pattern, so what was the next one, Scott?
- 21 SCOTT MARQUESS: 21, then 24, 24 --
- 22 LISA THOLL: About southeast of 31.
- 23 GARTH ANDERSON: Right there is 24.
- 24 SCOTT MARQUESS: 31, which I think is over
- 25 in the --

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1 GARTH ANDERSON: 31, 32, 32.
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- NEW SPEAKER: Bingo.
- 3 SCOTT MARQUESS: 34.
- 4 GARTH ANDERSON: Just shout it out when
- 5 you got it, that's right. 34, MW-34.
- 6 SCOTT MARQUESS: 43.
- 7 GARTH ANDERSON: And here's 43.
- 8 SCOTT MARQUESS: Then I think we also --
- 9 we sampled the treatment plant effluents. This was for
- 10 perchlorate and Dioxane, Dioxane A and E analysis.
- 11 We also sampled Johnson Creek and the treatment
- 12 plants, both the new treatment plant and the
- 13 existing treatment plant, so I would anticipate that
- 14 data will be available within a month or so.
- 15 GARTH ANDERSON: Okay. Thanks, Scott.
- 16 LYNN MOORER: I have a more general
- 17 question --
- 18 GARTH ANDERSON: Okay, you bet.
- 19 LYNN MOORER: -- or shall we say it's kind
- 20 of a different topic.
- 21 MUD has what they call their 404 permit
- 22 status sheet now on their web site, and at the
- 23 special RAB meeting two weeks ago somebody from the
- 24 Corps, I don't remember who, perhaps you,
- 25 Mr. Anderson, said that this was something that had

1 been -- or maybe it was Mr. Leibbert, said that it

- 2 had been vetted by the Omaha district; that is, the
- 3 document had been prepared by MUD, and then vetted
- 4 by the Omaha district.
- 5 And so I want to read you something here.
- 6 This is what it says on -- this is MUD's take on
- 7 their status of compliance with Condition No. 26,
- 8 which is under the area of natural resources and
- 9 mitigation.
- 10 And it says, both Kansas City and Omaha
- 11 districts of the Corps of Engineers have also
- 12 concluded that the baseline modeling, meaning MUD's
- 13 baseline modeling, which reflects pumping within
- 14 these restrictions, will not adversely impact
- 15 cleanup operations at the Mead NOP site.
- Mr. Anderson, do you agree with that at
- 17 least with respect to -- from the Kansas City Corps?
- 18 GARTH ANDERSON: Yes.
- 19 LYNN MOORER: All right. Thank you.
- 20 And this evening we have heard
- 21 Mr. Anderson give us a couple of fairly strong
- 22 statements. You said earlier, we expect to know
- 23 very early in the process if the plume moves; you
- 24 also said we're pretty confident we know where it's
- 25 going.

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1 Now, I contrast those statements to
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- 2 something that's in a document that's dated
- 3 February 13, 2006, and this is a letter from Gene
- 4 Gunn at USEPA Region 7, and it's his memorialization
- of a meeting that was held December 12th, 2005,
- 6 between the Kansas City Corps and DEQ and EPA
- 7 personnel, and it -- and one of the topics that was
- 8 discussed was the groundwater cleanup time frame.
- 9 And there has was discussion about how
- 10 specific a time frame would be, and so I want to
- 11 read from that portion. It says, the USACE, which
- 12 stands for the Corps, maintained that the ROD, the
- 13 record of decision, does not require groundwater
- 14 cleanup within a specified time frame, and that
- 15 cleanup within a specific time frame is not an
- 16 enforceable component of the ROD.
- 17 They say, they prefer that given the
- 18 uncertainty and fate and transport groundwater
- 19 modeling, they would prefer that the time to reach
- 20 groundwater cleanup be approached as a goal rather
- 21 than as an enforceable criteria.
- Now, to me that seems to be quite a stark
- 23 contradiction. On the one hand you are saying that
- 24 you are confident that you know where this plume is
- 25 going, you'll know very early in the process where

- 1 it moves, yet you -- and you agree with MUD's
- 2 statement that their pumping is not going to
- 3 adversely impact the cleanup operations at the NOP
- 4 site, yet you are unwilling to agree to an
- 5 enforceable time limit or shall we say making the
- 6 cleanup time frame be an enforceable criteria that
- 7 you all have to adhere to.
- 8 To me, those two things don't compute at
- 9 all. You are relying upon what you say is the
- 10 uncertainty about fate and transport in groundwater
- 11 modeling. I would like you to explain that
- 12 contradiction, Mr. Anderson, because it certainly
- 13 appears that you're trying to speak out of both
- 14 sides of your mouth. Thank you.
- 15 GARTH ANDERSON: I disagree with that
- 16 because these are -- those are actually two
- 17 completely unrelated issues.
- 18 LYNN MOORER: Please explain.
- 19 GARTH ANDERSON: The meeting that we had
- 20 with EPA, that discussion would have been exactly
- 21 the same had there -- had MUD been pumping or not.
- The question is, yes, there is uncertainty
- 23 in fate and transport modeling, and that's where
- 24 contamination actually goes, and the question at
- 25 hand was how long will it take -- through the

1 pumping that we're doing here, how long will it take

- 2 for this plume to eventually come down and finally
- 3 completely disappear through -- through the
- 4 operation of the extraction wells.
- 5 There's -- right now we're trying to get
- 6 a -- we're getting a better handle on the interior
- 7 of the plume now that we have containment fairly
- 8 well in place.
- 9 So we're looking -- the question is how --
- 10 given that the makeup of the plume, the composition
- of this plume and these other plumes, how long does
- 12 it actually take for the -- for the contamination to
- 13 get drawn down through here and into the -- into the
- 14 extraction wells.
- Now, that -- the fate and transport
- 16 modeling is not an exact science because there are a
- 17 lot of other factors. You can't just look at
- 18 hydraulics. Fate and transport of actual
- 19 contamination, there are other factors such as
- 20 dispersion, dilution, retard -- well, it's a factor
- 21 called retardation, it's kind of an unfortunate
- 22 term, but it's held up by the soil as it moves
- 23 through the -- you know, down the gradient toward
- 24 the extraction wells.
- 25 The -- so that question was just an

1 interpretation of the ROD, whether 130 years was an

- 2 enforceable number or a goal, and we're working
- 3 on -- on -- we're working on ways that will reduce
- 4 our anticipated restoration time of the plume.
- 5 Scott talked earlier about getting the
- 6 definition of the, you know, more concentrated parts
- 7 of the plume so we can attack those with some
- 8 focused extraction and thereby cutting the plume
- 9 into more manageable pieces, we can reduce the
- 10 restoration time.
- 11 Right now if you talk about the, you know,
- 12 MUD modeling, hydraulically we're seeing that there
- is not a whole lot of -- or based on their modeling
- 14 that we've reviewed, that it really doesn't
- 15 influence the plume as we have it in place today.
- 16 So therefore our cleanup would continue as
- 17 it is, and it would really not be affected by the
- 18 MUD pumping, so those are two completely independent
- 19 questions.
- 20 LYNN MOORER: Thank you for the
- 21 clarification. One follow-up question.
- 22 This letter from Mr. Gunn also notes that
- 23 Title 118, which is a part of the Nebraska
- 24 regulations, indicates a 20-year period is a
- 25 reasonable time frame for completing groundwater

- 1 cleanup.
- 2 Twenty years, and the lowest so far that
- 3 you all have been projecting is about a hundred and
- 4 thirty, and some of your estimates have said six
- 5 hundred and fifty years to clean it all up.
- 6 So I see that as a very, very large gap
- 7 between 20 years that DEQ is suggesting as a
- 8 reasonable time frame; have you all agreed that the
- 9 OU2 ROD should be reopened in order to specify a
- 10 20-year time frame for cleanup?
- 11 GARTH ANDERSON: No.
- 12 LYNN MOORER: What is -- what is your
- 13 response to DEQ's regulatory authority with respect
- 14 to this 20-year period that they think is the
- 15 reasonable time frame?
- 16 GARTH ANDERSON: Technically unfeasible.
- 17 LYNN MOORER: And --
- 18 GARTH ANDERSON: I wish --
- 19 LYNN MOORER: I'm sorry.
- 20 GARTH ANDERSON: And DEQ acknowledges the
- 21 technical infeasibility of the 20-year. The
- 22 20 years is really based on sites that are nowhere
- 23 near this magnitude. This is 11 square miles, and
- 24 just the travel time of water from here to here is
- 25 greater than 20 years, so --

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1 LYNN MOORER: Okay. Mr. Marquess, I
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- 2 noticed that this letter also says, EPA also noted
- 3 that the groundwater cleanup ultimately must occur
- 4 in a time frame consistent with the OU2 ROD, the NCP
- 5 and Nebraska Title 118, which is the one I just
- 6 mentioned, so that does seem to me to be a gap there
- 7 with respect to what Title 118 requires and what the
- 8 Corps says it will do or what his -- what its
- 9 position is at this time.
- 10 SCOTT MARQUESS: Well, I'm not going to
- 11 try and interpret Title 118 tonight. I can tell you
- 12 what is going to happen in terms of the site
- 13 management plan as far as the cleanup.
- 14 I don't know, Alyse, did you want to talk
- 15 to Title 118?
- 16 ALYSE STOY: Yeah, I can.
- 17 Hi, I'm Alyse Stoy, and I'm an attorney
- 18 now working on the project with the EPA.
- 19 Maybe I can talk just generally a little
- 20 bit about how we identify what we call ARARs and
- 21 those are state and local requirements that are
- 22 applicable to any superfund cleanup.
- We're required by federal law to ensure
- 24 that superfund cleanup like this one achieve not
- 25 only what the federal requirements are out there,

1 but the state has enacted its own rules and

- 2 requirements for cleanup goals.
- 3 We do a lot of groundwater cleanup in the
- 4 state of Nebraska, and Title 118 is universally--an
- 5 ARAR established that on every single one of them,
- 6 at least the ones I work on.
- 7 You're right, ideally a 20-year time frame
- 8 is what is stated in Title 118, but it also says --
- 9 I don't have it in front of me, but it does have
- 10 the -- or whatever reasonable time frame it is, and
- in this type of site it's a very large, complex
- 12 site.
- So when Scott and myself, as the attorney,
- 14 we look to see what is an enforceable time frame
- 15 here. The technical part has to come into play to
- 16 figure out what is -- what -- just as Garth just
- 17 said, what is technically feasible in order to
- 18 achieve a cleanup goal. In this case, the goal is
- 19 to achieve MCLs.
- 20 So in this instance, the ROD -- the
- 21 1997 ROD certainly identified a much longer time
- 22 frame, and we do have other cleanups where we, in
- 23 order to achieve a clean up, have to go and look to
- 24 beyond a 20-year time frame.
- 25 But what Scott has been working with the

1 Corps on for some time is to figure out what is the

- 2 combination of what is technically feasible combined
- 3 with how do we get the cleanup achieved in-- as
- 4 quick as possible, as a nontechnical term.
- I mean, it's in everybody's interest to
- 6 make sure that this system is not only contained,
- 7 but it's restored, given just the impact it has
- 8 already caused and the concerns that you all have
- 9 about the MUD pumping wells.
- 10 So I don't know if that helps to answer
- 11 just the general question. Part of this site
- 12 management plan that the Corps has been working on,
- 13 we've been working to try to identify what's a
- 14 reasonable approach to identifying how do we answer
- 15 this question of what is a reasonable time frame
- 16 combining the technical practicability, we have to
- 17 look at the cost, and, again, what -- what's
- 18 achievable and a time frame that is protective.
- 19 GARTH ANDERSON: Our goal is always to
- 20 reduce the restoration time whatever way we can
- 21 that's feasible. Larry?
- 22 LARRY ANGLE: Larry Angle, North Platte
- 23 North NRD.
- 24 About ten years ago we discussed this in
- 25 detail with the Corps. They had two plans: One was

1 kind of just a hundred-year treatment as you go, if

- 2 you will, letting the contaminant flow to the
- 3 remediation wells, and the other plan that was
- 4 discussed at that time was more of a 50-year
- 5 cleanup.
- 6 That was going to cause more pumping wells
- 7 to be installed, and the NRD and some of the area
- 8 farmers were concerned about the declining
- 9 groundwater levels, and what that would do to the
- 10 aquifer.
- 11 And so we were basically questioning that
- 12 and were reluctant to go with that 50-year cleanup
- 13 goal, and the Corps, they agreed with us and they
- 14 backed off to the hundred, so that's where we are
- 15 today. It can be done in 50 I believe, but, again,
- 16 you would decline the groundwater significantly if
- 17 you did that.
- 18 SCOTT MARQUESS: Just one point, the site
- 19 management plan approaches the groundwater cleanup,
- 20 it's got a four-phased approach, so we're going to
- 21 look at each one of the plumes at a time.
- You know, what you've heard a little bit
- 23 about tonight is the sampling at the easternmost
- 24 plume, getting a lot of good data, finding out what
- 25 the hot spot is, and the next steps will be, all

- 1 right, well, okay, we see where the hot spot is,
- 2 what's -- how much is it going to cost to clean it
- 3 up and how much time.
- 4 So if we spent a million dollars we can
- 5 clean up that -- this -- this plume, million dollars
- 6 we can clean it up in 200 years, \$10 million we
- 7 clean it up in a 50 years, you know, \$100 million we
- 8 clean it up in two months.
- 9 So that's -- and so when we get -- that'll
- 10 be based on the additional data that's going to be
- 11 collected, additional groundwater modeling that'll
- 12 be based on this new data, and then a feasibility
- 13 study to look at how -- you know, once we define the
- 14 problem, what's the solution and how much is it
- 15 going to cost.
- So there'll be a range -- stop me -- this
- is what we've agreed to; there'll be a range going
- 18 from low cost, less aggressive plume cleanup to high
- 19 cost, more aggressive quicker cleanup, and we're
- 20 going to look at that and see if we can come up
- 21 with -- we can reach agreement as to what we're
- 22 going to implement here, and that'll be something
- 23 that'll occur east plume, next eastern, further west
- 24 and finally Load Line 1 plume.
- 25 And when we get to that point that'll all

- 1 be briefed here and everybody will have an
- 2 understanding of what's going on and then what the
- 3 remedy that's going to be selected, what's going --
- 4 you know, what that's going to consist of.
- 5 So that's the plan for moving forward in
- 6 terms of getting a better handle on restoration time
- 7 frame.
- 8 GARTH ANDERSON: And the good thing is
- 9 this can all be done within the context of the
- 10 current ROD because it does allow for focused
- 11 extraction technologies, which is really the leading
- 12 technology that we'd be looking at right now.
- 13 LYNN MOORER: I appreciate the
- 14 explanation. I should note though it does say in
- 15 this letter, which is, again, the Gene Gunn letter
- 16 dated February 13, 2006, it says, it is understood
- 17 that some type of modification of the OU2 ROD may be
- 18 necessary depending on the outcome of future work.
- What you're telling us, Mr. Anderson, is
- 20 no?
- 21 GARTH ANDERSON: What I'm telling you is
- 22 that right now it looks like everything can be done
- 23 in the context of the ROD.
- 24 LYNN MOORER: But it is still possible
- 25 that it may need to be reopened?

GARTH ANDERSON: The process allows for

- 2 RODs to be modified if the circumstances warrant.
- 3 The national contingency plan, the CERCLA process
- 4 allows for that.
- 5 Okay. Looks like that's all the questions
- 6 on the data. We whipped through it tonight. We
- 7 appreciate -- I think everyone wants to get home
- 8 and -- because of the bad weather.
- 9 Future RAB topics, again, give the people
- 10 what they want. This isn't show business, I know
- 11 this hasn't been very entertaining tonight, but
- 12 we're interested in topics that you want to hear at
- 13 each and every RAB.
- 14 Right now we have a tentative date
- 15 established for July 13th, which is our normal
- 16 three-month cycle. One of the -- one of the topics
- 17 that we've agreed every time to talk about is our
- 18 quarterly monitoring, so at the July meeting we'll
- 19 be talking about the sampling that we're doing right
- 20 now.
- 21 And if there are other topics, feel free
- 22 to e-mail me, my e-mail address is at the end of
- 23 this, I'll give my card to whomever wants it, you
- 24 know, I like to find out what's really -- what
- 25 you're really interested in.

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1 SCOTT MARQUESS: Comment.
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- 2 GARTH ANDERSON: Let me back up, can you
- 3 back up a slide?
- 4 Some good news tonight, a community member
- 5 came to the open house tonight because he couldn't
- 6 make it to the RAB meeting, and he asked to actually
- 7 join the RAB, the former RAB, Mr. Paul Randazzo, so
- 8 we're happy to have him on board.
- 9 He submitted his interest form and we --
- 10 you know, we'd like to welcome him onto the RAB and
- 11 his participation and input into the process.
- 12 And if anybody else is interested in
- 13 actually joining the RAB, the board itself, we
- 14 have -- we do have some forms back there.
- I apologize, there's a handwritten
- 16 strike-through on there so we can actually say it's
- 17 the Mead site, but Paul surprised us tonight by
- 18 wanting to join, so I said, well, heck, I better
- 19 make up some forms in case anybody else wants to
- 20 join.
- 21 So that's good news. It's good to get the
- 22 community involved in the actual RAB itself
- 23 formally.
- 24 Slide.
- One thing that we're going to do in

- 1 addition to the RAB this summer, is we've had a lot
- 2 of folks that have been very interested in actually
- 3 touring the site because we have -- we're always
- 4 proud to show off our treatment plant, our treatment
- 5 building.
- 6 It's pretty impressive when you see the
- 7 guys from ECC, our operating contractors, working
- 8 that thing, it's quite a sight to behold. It's high
- 9 tech, it operates at a greater operational rate than
- 10 just about any site in the country.
- We'll put it up against just about
- 12 anyplace else, and I think a lot of people are
- 13 interested in looking at what we put in down at the
- 14 end of Load Line 1, the new air stripper and the
- 15 extraction wells.
- And, of course, it'll be a lot of fun,
- 17 little bus tour around so you can get an idea of the
- 18 magnitude of the plume, go around and look at the
- 19 perimeter.
- 20 So we'll announce a date of that -- that
- 21 site tour. Again, this is not a RAB meeting, this
- 22 is just a site tour that people have expressed
- 23 interest in having.
- 24 MELISSA KONECKY: Garth, are you -- are
- 25 you saying that in order to be an official RAB

1 member people have to, like, express an interest

- 2 or --
- 3 LINDA WAGEMAN: Can you repeat the
- 4 question, Melissa, I couldn't hear you?
- 5 MELISSA KONECKY: I just wondered if in
- 6 order for you guys to consider these community
- 7 members a RAB member, do they have to proactively
- 8 ask to be on the RAB?
- 9 GARTH ANDERSON: Yes.
- 10 MELISSA KONECKY: So in other words,
- 11 Lorus, as he sits here, and Nadeen and Victor are
- 12 not RAB members?
- 13 GARTH ANDERSON: That's correct. We would
- 14 certainly welcome their participation as official
- 15 RAB members if you'd like to fill out an interest
- 16 form, and -- so we can designate you as official
- 17 members of the board, certainly.
- 18 MELISSA KONECKY: You know, I can't
- 19 remember filling out an interest form.
- 20 GARTH ANDERSON: You did. 1997, everyone
- 21 that submitted an interest form in 1997 when we
- 22 formed the RAB was invited to join, and we welcomed
- 23 you and Kay Moline and Ross Rasmussen and several
- 24 others onto the board, and in about 1998 I believe
- 25 Kay had to resign as the co-chair because of other

1 duties, and the board elected you as the co-chair.

- 2 MELISSA KONECKY: Well, actually, you
- 3 know, I guess, you know, what I was thinking was
- 4 that, you know, a lot of people have put a lot of
- 5 work into this -- into this stuff and have done a
- 6 lot of, you know, searching through files and
- 7 everything, and it just seems like a slap in the
- 8 face for them to say, you know, they're not RAB
- 9 members.
- 10 GARTH ANDERSON: Well, they certainly can
- 11 be RAB members. Let's give them credit where credit
- 12 is due, and they could fill out the interest form or
- 13 talk to me and we'll see about having you officially
- 14 designated as a RAB member.
- 15 LYNN MOORER: Mr. Anderson.
- 16 GARTH ANDERSON: Yes.
- 17 LYNN MOORER: I think it might just be
- 18 helpful to note that a lot of people feel that you
- 19 play fast and loose with the rules, so to speak,
- 20 when it comes to the RAB people.
- 21 On the one hand, you have a lot of people
- 22 that have been giving their heart and soul for this
- 23 for a long time, and coming to meetings very
- 24 regularly and very faithfully working on this, and
- you say, no, you're not a RAB member.

1 Yet when it comes to what the RAB Guidance

- 2 actually calls for in terms of how you designate
- 3 what's a RAB member, what you're doing here with the
- 4 interest forms isn't what RAB Guidance says the way
- 5 the RAB members are to be chosen.
- 6 So it's kind of like you -- and at one
- 7 meeting you try to impose unilateral rules on the
- 8 way things are going to run, but that's not what the
- 9 RAB has decided.
- 10 So we just ask that you respectfully --
- 11 that you respect the people in the community and
- 12 recognize that anybody who comes to this meeting has
- 13 a right to have all their questions answered, and
- 14 there should not be a distinction as to either you
- 15 are an anointed RAB member or not. Everybody has the
- 16 right to have the information.
- 17 GARTH ANDERSON: Well, unfortunately RAB
- 18 business is not a topic for the agenda tonight, but
- 19 I would love at some point to be able to discuss RAB
- 20 business and go over the RAB Guidance so people
- 21 understand what the duties of a RAB member are and
- 22 what's expected.
- 23 The interest form is actually taken right
- 24 out of the RAB Guidance; I pulled it right out of
- 25 the guidance and --

1 LYNN MOORER: Current RAB Guidance doesn't

- 2 quite provide for it, but there is no reason --
- 3 GARTH ANDERSON: I can understand your
- 4 point.
- 5 LYNN MOORER: I'm not sure you understand
- 6 the point. The thing of it is is that we would like
- 7 you to be consistent and fair with the community,
- 8 that's the point.
- 9 GARTH ANDERSON: Absolutely, and even the
- 10 community members that are not official RAB members
- 11 still have a right to come to a RAB meeting and ask
- 12 questions; there's no question about that. That's
- 13 always been in the guidance, always will be in the
- 14 guidance.
- 15 Yes, Lorus.
- 16 LORUS LUETKENHAUS: On your water model,
- 17 you have experts in Omaha that can read a water
- 18 model, correct?
- 19 GARTH ANDERSON: Yes.
- 20 LORUS LUETKENHAUS: Or build a water
- 21 model?
- 22 GARTH ANDERSON: Yes.
- 23 LORUS LUETKENHAUS: They can build one?
- 24 GARTH ANDERSON: If you ask them they
- 25 would certainly do that.

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1 LORUS LUETKENHAUS: So there's no problem
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- 2 here, you got a lot of information, if we say we
- 3 want a three-layer water model here, you could
- 4 build -- they could build it for us?
- 5 GARTH ANDERSON: Sure, if that's --
- 6 LORUS LUETKENHAUS: Thank you, I'm glad to
- 7 hear that.
- 8 GARTH ANDERSON: You can create a water
- 9 model however -- you know, whatever your
- 10 requirements are, you can make it. Is it the right
- 11 model? Don't know.
- 12 LORUS LUETKENHAUS: Let's put in all the
- 13 information you have right now and let's make a
- 14 three-layer water model, and let's run some water
- 15 models when the Platte River is almost dry.
- 16 GARTH ANDERSON: Whose model are you
- 17 talking about first of all?
- 18 LORUS LUETKENHAUS: You just told me you
- 19 can run a water model.
- 20 GARTH ANDERSON: That was a rhetorical
- 21 question. Yes, people can build a three-dimensional
- 22 water model.
- 23 You're talking about our water model that
- 24 we use to manage the site or are you talking about
- 25 MUD's groundwater model?

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1 LORUS LUETKENHAUS: I don't really see
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- 2 myself that there's a whole heel of a lot of difference.
- 3 GARTH ANDERSON: Well, they are two
- 4 separate models for two different purposes, although
- 5 they're looking at a problem from different sides.
- 6 LORUS LUETKENHAUS: You just told me that
- 7 they could do it though.
- 8 GARTH ANDERSON: Anything is possible.
- 9 LORUS LUETKENHAUS: You understand me.
- 10 GARTH ANDERSON: I understand the
- 11 question. You can build a model however you want to
- 12 build it; whether you need to or not is another
- 13 question.
- LORUS LUETKENHAUS: Well, we need to.
- 15 Let's build a water model between the plume and
- 16 their well field and let's have a draw-down map
- 17 showing when they're pumping 104 million gallons a
- 18 day, which they're permitted to, when there is low
- 19 flow in the river, when there's no flow in the
- 20 river, after 30 days of no flow, and after 60 days
- 21 of no flow, which they are permitted to do, and then
- 22 let's see what we come up with.
- 23 GARTH ANDERSON: We'll take that comment
- 24 back, not going to say that they're going to do it
- or not do it, but we'll certainly bring that up in

1	our	next	discuss	ion.
2			Okay.	Five-minute break, change the tape
3				(9:02 p.m Recess taken.)
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1 (At 9:10 p.m., with parties present as
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- before, the following proceedings were had, to-wit:)
- GARTH ANDERSON: We'll go ahead and wrap
- 4 it up.
- 5 We came real close to having enough tape
- 6 to almost complete the meeting, but we've changed
- 7 the tape. We're at the point of any last questions,
- 8 or if anybody has given any thought to any topics
- 9 for the next RAB meeting.
- Yes, Mr. O'Hara.
- 11 MR. O'HARA: Do you want to point out the
- 12 numbers has changed so if people have difficulty contacting --
- GARTH ANDERSON: That's a good point.
- 14 Like every good business or every
- 15 government agency occasionally needs to change its
- 16 phone numbers, so ours is no exception, so any
- 17 numbers that you have for the Corps of Engineers
- 18 that has a prefix of 983 should now be 389.
- 19 It had nothing to do with our dyslexia and
- 20 reading the numbers backwards, but, yeah, if you --
- 21 I think I've sent it to everybody that's on my
- 22 e-mail list that it's a 389 number, but just be
- 23 aware.
- 24 LARRY ANGLE: It's on your sheet.
- 25 GARTH ANDERSON: Yeah, it's also on my

1 sheet. Mary Lyle had to go. Her -- there it is, so

- 2 389-3255, feel free to call me anytime, and there's
- 3 my e-mail address. I'm always near my computer, so
- 4 if you have any questions for me please feel free to
- 5 e-mail me.
- 6 And I'd love to get you on my e-mail list
- 7 so that I can send out notices and documents as
- 8 we -- as they become final.
- 9 Okay. That looks like a wrap. Thanks for
- 10 coming. I hope everyone's house weathered the storm
- 11 okay and that there's no damage out there.
- 12 See everybody on July 13th, for the next
- 13 RAB meeting, and I will announce the date of the
- 14 site tour in June. Thank you.
- 15 (9:15 p.m. Adjournment.)
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